FINANCIAL TIMES

ENI sell-off
The final countdown
Page 15

France
Hard choices on social security
Page 14

Conservation
Ontario's green households
Page 12

Today's surveys
Information technology
Aluminium
Separate sections

World Business Newspaper — WEDNESDAY NOVEMBER 1 1995 — D8523A

Eurotunnel setback as tribunal rejects claim for £2.5bn

A £2.5bn ($3.95bn) claim by Eurotunnel against British Rail and the French national railway, SNCF, was dismissed yesterday by an international tribunal in a significant setback for the debt-laden company. The Anglo-French operator of the Channel tunnel had been seeking additional payments from the two railways for the use they make of the tunnel for Eurostar passenger and international freight services. Page 17

Threat to French TGV expansion: France may slow down the expansion of its high-speed TGV rail network in response to budgetary pressures and the debt burden at national rail operator SNCF. Page 2

Clinton warning on peace in Bosnia: US President Bill Clinton said the Balkan peace talks which start today in Ohio were "maybe the last chance" for peace in Bosnia "for a very long time". Page 3

Sharp rise in French unemployment:

French unemployment rose by 28,200 in September to 2.95m, dealing a blow to Mr Alain Juppé's conservative government and adding to pressure on the Bank of France to lower interest rates. The increase comes amid growing concern of a slowdown in the economy and the rate of job creation as the government seeks to cut its public sector deficits to satisfy the conditions for European monetary union. Page 16; Weighed down care burden, Page 14

Russian oil group auction attacked: Managers of Russia's second largest oil producer, Surgutneftegaz, have been accused of trying to prevent outsiders from participating in Friday's auction for a 40 per cent stake in the company. Page 16

AEG, the German industrial group and subsidiary of Daimler-Benz, confirmed plans for the sale of its energy and automation divisions, marking the latest stage in a programme to divest unprofitable operations. Page 17

Nigerian sentenced to death: A special tribunal set up by Nigeria's military regime has sentenced to death minority rights leader Ken Saro-Wiwa for alleged involvement in the murder of four local politicians. Page 6

Brussels agrees Seat aid package: After months of negotiations the European Commission approved a Pta46bn ($377m) aid package for Seat, Spain's former state-owned car maker which is now a subsidiary of Germany's Volkswagen. Page 2

Viacom, the US media group, reported strong growth in revenues and cash flow at its Blockbuster and MTV subsidiaries, largely offset by lower results from the Paramount film studio. Total revenues from networks and broadcasting were up 15 per cent to $551m and cash flow by 23 per cent to $185m. Page 20

US considers extending debt ceiling: President Bill Clinton and the Republican leadership in Congress will discuss a temporary extension of the federal debt ceiling designed to avoid the US government defaulting on its financial obligations. Page 4

Sony shares fall: Shares in the Japanese consumer electronics and entertainment group suffered a sharp drop amid concerns over rising overseas inventories. Page 21

Israel seals first Gulf Arab deal: Israel signed its first large commercial deal with a Gulf Arab state with a memorandum of intent to buy Qatari liquefied natural gas through US energy company Enron. Page 5

Sri Lankan rebels flee: More than 100,000 Tamil Tiger rebels and civilians have fled Jaffna over the past two days as the Sri Lankan army approached the northern rebel stronghold, a senior western relief worker said.

Fight for UK stadium site: Britain's first national sports stadium, which will stage events such as soccer's FA Cup final, is to be either at Wembley in London or at a new site in Manchester. The UK Sports Council will announce the winner next year. Page 9; Editorial Comment, Page 15

Ancient Chinese remains unearthed: Archaeologists have unearthed remains of soldiers believed to have been buried alive 2,200 years ago during China's Warring States era in northern Shanxi province.

STOCK MARKET INDICES

New York lunchtime		
Dow Jones Ind Av	4,791.97	(+35.40)
NASDAQ Composite	1,042.76	(+3.07)
Europe and Far East		
CAC40	1,814.01	(+18.67)
DAX	2,167.91	(+21.80)
FT-SE 100	3,529.1	(+19.1)
Nikkei	17,654.64	(+145.47)

US LUNCHTIME RATES

Federal Funds	6%
3-mth Treas Bills: Yld	5.451%
Long Bond	107¼
Yield	6.326%

OTHER RATES

UK: 3-mo interbank	6⅝%	(same)
UK: 10 yr Gilt	103⅞	(103⅜)
France: 10 yr OAT	103.16	(102.92)
Germany: 10 yr Bond	100.46	(100.2)
Japan: 10 yr JGB	113.79	(112.55)

NORTH SEA OIL (Argus)

Brent 15-day (Dec)	$16.36	(16.26)

GOLD

New York: Comex		
(Dec)	$384.3	(383.8)
London:		
close	$382.7	(382.1)

DOLLAR

New York: lunchtime		
£	1.5825	
DM	1.40835	
FFr	4.882	
SFr	1.136	
Y	102.125	
London:		
£	1.5779	(1.5771)
DM	1.4083	(1.407)
FFr	4.8829	(4.8845)
SFr	1.1365	(1.137)
Y	102.245	(101.85)

STERLING

DM	2.2221	(2.2162)
Tokyo close:	Y 101.8	

Austria	Sch35	Greece	Dr400	Malta	Lm0.60	Qatar	QR13.00		
Bahrain	Din1.250	Hong Kong	HK$20	Morocco	MDh15	S.Arabia	SR11		
Belgium	BFr70	Hungary	Ft215	Neth	Fl 4.25	Singapore	S$4.30		
Bulgaria	Lev10.00	Iceland	IKr220	Nigeria	Naira90	Slovak Rp	Sk60		
Cyprus	C£1.10	India	Rs75	Norway	NKr18.00	S. Africa	R12.00		
Czech Rp	Kr55	Israel	Shk7.90	Oman	OR1.50	Spain	Pta250		
Denmark	DKr17	Italy	L3000	Pakistan	Rs40	Sweden	SKr17		
Egypt	E£5.00	Japan	Y500	Philippines	Pso50	Switz	SFr3.60		
Estonia	EKr 20	Jordan	JD1.50	Poland	Zl4.20	Syria	S£50.00		
Finland	FM15	Kuwait	Fils625	Portugal (m'land)	Es230	Tunisia	Din1.500		
France	FFr11.00	Lebanon	US$1.50			Turkey	L60,000		
Germany	DM3.80	Lux	LFr70			UAE	Dh12.00		

© THE FINANCIAL TIMES LIMITED 1995 No 32,821 Week No 44 LONDON · LEEDS · PARIS · FRANKFURT · STOCKHOLM · NEW YORK · LOS ANGELES · TOKYO

Concessions likely after Quebec separatists narrowly lose referendum

Canada faces battle for unity

By Bernard Simon in Ottawa

Canada's government came under intense pressure yesterday to act quickly to restore national unity after Quebec separatists almost won a referendum on independence for the French-speaking province.

Relief outside Quebec that Canada remained in one piece was tempered by the narrow margin of the referendum victory, with 49.4 per cent of voters opting for independence. Political observers called the outcome a "wake-up call" to accommodate Quebec's demands for wider powers and recognition of its distinctive French-speaking character.

Separatist leaders said they planned to renew their long crusade for independence. Monday's vote was far closer than the 60-40 result of the last sovereignty referendum in 1980. In a remarkable display of democracy, about 94 per cent of 5m eligible voters cast their ballots.

Mr Lucien Bouchard, the driving force behind the pro-secession camp's strong showing, said "the Canadian problem remains. It is even exacerbated by the outcome".

Canadian financial markets rallied strongly yesterday. The Canadian dollar surged to 74.47 US cents at midday, about 1 cent higher than Monday's close. The Bank of Canada discount rate fell to 6.18 per cent at its weekly setting yesterday from 7.65 per cent last week.

The gap between US and Canadian 10-year bond yields narrowed from 1.80 to 1.55 percentage points, while the Toronto stock exchange's TSE-300 index gained more than 2 per cent in early trading.

"We're looking forward to markets with more liquidity and less volatility," said Mr Ted Carmichael, chief economist at JP Morgan's Canadian subsidiary. But investments in Canada would continue to carry a political risk premium, he said.

Mr Jean Chrétien, Canada's prime minister, spent most of yesterday with his cabinet considering its response to the referendum result. Mr Chrétien is expected to outline his strategy in a speech in Toronto tonight.

"I am in favour of certain changes and will bring about these changes very quickly," Mr Chrétien told the Canadian parliament yesterday.

Premiers of several English-speaking provinces called on Ottawa to devolve more powers to the provinces as a first step to accommodating Quebec.

The separatist government in Quebec City is likely to reject any conciliatory overtures from Ottawa. But many Québécois – including a significant number of those who voted in favour of independance on Monday – are thought to be receptive to a deal which would allow Quebec to remain part of Canada.

The referendum has raised questions about the future of several veterans of Canada's constitutional wrangles.

Mr Chrétien's position has

Continued on Page 16
Background, Page 4; Editorial comment, Page 15; Lex, Page 16; Splitting headaches in the debt markets, Page 17; Government bonds, Page 26

Mixed emotions: Daniel Johnson, left, leader of the successful 'No' campaign, pauses during a post-referendum speech at his Montreal headquarters, while Quebec premier Jacques Parizeau gives the victory sign to his secessionist supporters despite losing the vote Picture: Reuter

Canadian dollar

Source: FT Extel

Lubbers set to become next Nato chief

Germany now supporting former Dutch PM

By Peter Norman in Bonn and Bruce Clark in London

Mr Ruud Lubbers, the former prime minister of the Netherlands, emerged yesterday as the probable successor to Mr Willy Claes as secretary-general of Nato after Germany joined Britain and France in backing his candidacy.

Chancellor Helmut Kohl of Germany, who had until recently objected to Mr Lubbers, said he would support the Dutch Christian Democrat if he decided to apply formally for the job.

Mr Kohl's statement of support, the day after Mr John Major, the UK prime minister, and President Jacques Chirac of France threw their weight behind Mr Lubbers, removed a large potential barrier to his appointment. Diplomats said it was likely tha Dutch politician would be installed on December 5 when alliance foreign ministers confer in Brussels. The meeting may coincide with the Nato deployment of up to 60,000 troops in Bosnia if peace talks today in the US bear fruit.

Mr Lubbers, 56, is currently a lecturer in economics at the University of Brabant in the Netherlands following his retirement last year from a 22-year career in Dutch politics. He withdrew from tha public eye after failing to become president of the European Commission, largely because of Mr Kohl's objections. Mr Kohl's antipathy to Mr Lubbers, which was never formally explained, is believed to date back to Mr Lubbers' opposition, as prime minister of the Netherlands, to German unification. Mr Chirac is understood to have convinced the German leader to rethink his attitude.

A staunch supporter of the transatlantic tie, Mr Lubbers has no specialist interest in defence, but he enjoys widespread respect as a mediator, having played a key role in preparations for the Maastricht treaty in 1991.

In his own country, be has assembled both centre-right and centre-left coalitions, and as prime minister, he overcame bitter discontent over harsh cuts in the Netherlands' traditionally generous social welfare programmes. Italy also threw its weight behind the candidacy of Mr Lubbers yesterday, in a statement which revealed that tha Netherlands government has been lobbying intensively behind the scenes. The Dutch government had been cautious about giving formal notice that Mr Lubbers was a candidate to succeed Mr Claes, who was forced to resign after being named in a corruption scandal. But yesterday, the Netherlands floated the idea of his candidacy at a meeting of Nato ambassadors in Brussels and received a favourable response, diplomats said.

Cool-hand Ruud, Page 3
Observer, Page 15

Springer pulls out of Europe Online information network

By Judy Dempsey in Berlin and Alan Cane in London

Axel Springer, one of Germany's largest publishing groups, yesterday confirmed it was pulling out of Europe Online, an electronic information network due to be launched next year.

Springer, which had been due to take a 21.3 per cent stake in the Luxembourg-based company, said it was withdrawing "for economic reasons and because the ownership structure is still unclear". However, the group said it still aimed to be one of the providers of content.

The European market for information of all kinds delivered to residential customers' personal computers over telecommunications networks could be worth up to $7.4bn a year by 2000.

This market, offering information such as news, shopping and travel details, differs substantially from traditional online services which are expensive, difficult to use and generally provided to professional researchers.

Europe Online's main shareholders include Burda, the German publishing group; Pearson, publisher of the Financial Times; Matra Hachette, the French publisher, and private investors.

The continuing involvement of Matra Hachette, which along with Burda and Pearson would provide content for the information service, appears uncertain. Europe Online said yesterday it was told by Matra it would be withdrawing completely. "But we are not prepared to confirm this, or Springer's decision," it said.

Europe Online had at one stage wanted to launch the service by the end of this year to coincide with the start of another joint venture in online information services set np by America Online, the fastest growing online services group in the US and Bertelsmann, Germany's biggest pnblisher and entertainments group. Unlike America/Bertelsmann, bowaver, Europe Online wants to have a distinct European flavour and will be available in English, French and German with other languages to follow.

The content providers will includa Pearson, Burda and Matra as well as Springer. Springer is the owner of the mass circulation Bild Zeitung newspaper, Die Welt, a daily, and several local newspapers and has a stake in Sat-1, the independent commercial television channel in which Mr Leo Kirch, the Munich-based mogul holds a substantial share. Mr Kirch also holds at least a 35 per cent stake in Springer.

Vebacom, the telecommunications division of Veba, the German industrial conglomerate, still intends to acquire a 10 per cent stake in Europe Online. Pearson and Matra Hachette had been expected to reduce their stakes to make way for Springer and Vebacom.

Protection against EU currency swings is rejected

By Lionel Barber in Brussels

The European Commission yesterday rejected a French-led campaign for special assistance to protect strong currency economies against exchange rate devaluations in Italy, Spain and Britain.

In a study on monetary fluctuations and the single market, the Commission has concluded there is no evidence to support claims that hard currency economies are suffering as a result of competitive devaluations by weaker neighbours.

The report's conclusions are likely to disappoint powerful sectors in the Belgian, French and German exporting industries, such as aerospace, cars, clothing, and shipbuilding, which lobbied for protection against currency swings either through trade barriers or temporary aid measures.

The study concedes that industrial sectors such as cars and textiles, notably in border regions, have been burt by currency swings, but it rejects calls for extraordinary aid on the grounds that it would fragment the single market.

Mr Yves-Thibault de Silguy, monetary affairs commissioner, and Mr Mario Monti, single market commissioner, both argued yesterday that the most effective response to currency fluctuations was economic and monetary union.

The Commission study covers the period 1987-1995, with special reference to the past three years when five currencies (those of Italy, Spain, Portugal, Sweden and Britain) have depreciated by 20 per cent or more against the most stable currencies in the European Monetary System.

EU leaders, prodded by President Jacques Chirac of France ordered the Commission to draw up a report after their summit last June. Fierce behind-the-scenes lobbying in Brussels ensued, as Mr Monti indicated. "We have resisted major pressures which, if they bad been accepted, would have led to a further fragmentation of the single

Continued on Page 16
Editorial Comment, Page 15

CONTENTS

هكذا من الأصل

France may slow TGV expansion

By John Ridding in Paris

The French government may put the brakes on the expansion of the country's high-speed train network in response to budgetary pressures and the debt burden at SNCF, the national rail operator.

Mr Bernard Pons, the French transport minister, said yesterday that he had commissioned a study into the future development of the *Train d Grande Vitesse* (TGV) network. "The continuation of the programme of new lines at the pace that we have seen up until now does not appear compatible with the objective of restoring the finances of the SNCF," he wrote in Le Monde, the daily newspaper.

Mr Pons's comments come as the government and the state-owned railway network are negotiating financial and investment plans for the period 1996-2000. The government is pressing for economy measures and restructuring at the railway to reduce losses forecast to reach FFr12bn ($2.5bn) this year and to cut total debts of about FFr175bn.

The French transport minister said that the state is ready to assume part of the debt. "But this effort will be tied to the respect by the company of recovery objectives that we will determine together," he added.

The TGVs, which travel at up to 300km per hour, are a symbol of French high technology and the pride of SNCF. Since the first line was completed between Paris and Lyons in 1983, the network has grown to cover more than 1,200km of high-speed track, with more than 300 trains.

However, the huge cost of the projects has placed increasing financial pressure on the railway operator. "The average project costs about FFr25bn," said an SNCF official, adding that most of the high-speed lines have been partly financed by the railway company.

Officials at the Transport Ministry played down the threat to existing projects, such as the link between Valence and Marseilles in southern France which will link the Mediterranean port city to the high-speed line to the capital. Work has started on the link, and is due to be completed in 1999. Another project confirmed by the government is the TGV Est, linking the capital and the eastern city of Strasbourg.

Mr Pons's comments appeared to concern future projects, not yet concluded. "Each region has its TGV plans," said one official. "Mr Pons is saying that the rate of extension of the network may not be maintained. We are still at the point of examining the question, that is why the report has been called for." The report is to be prepared by Mr Philippe Rouvillois, a former chairman of SNCF. He is due to submit his findings in the first quarter of 1996.

Spain makes progress in efforts to restructure its industries

Brussels approves Seat plan

By Tom Burns in Madrid and Emma Tucker in Brussels

Spain's efforts to support its ailing industrial sectors chalked up a first victory yesterday when the European Commission finally approved a Pta46bn ($377m) aid package for Seat, the Barcelona-based former state-owned car manufacturer that is now a subsidiary of Germany's Volkswagen.

The approval was granted after months of negotiations on a "one time, last time" basis and was linked to a restructuring plan, involving job cuts and plant closures to reduce Seat's capacity by 29 per cent and that of the Volkswagen group in the 18-nation European Economic Area by a net 5 per cent.

Welcomed as "highly satisfactory" by Madrid officials, the Seat breakthrough came at a time of continuing Spanish talks with Brussels to allow capital injections into Iberia, the debt-ridden national airline, and into the loss-making state-owned shipyards which are overdue for a rationalisation programme.

The Seat subsidy was held up in Brussels when Madrid's Industry Ministry, seeking domestic political support for the aid package, said the funds were routed towards aiding research and development projects for the car company.

The high-tech spin that Madrid put on the package was contested in June by the EU competition commissioner, Mr Karel Van Miert, and the Spanish government was forced to reapply for approval from Brussels, this time explicitly stating that the funding would be routed towards restructuring Seat.

The cuts at Seat, which will be based on the 780,000 units built by the company in 1993, are not new.

They were mapped out by Volkswagen – which acquired the car producer in 1986 – last year following recession-induced losses and the opening of a new production centre outside Barcelona that made the company's old plant, near the city's port area, wholly obsolete.

Volkswagen has already axed 6,000 jobs to lower Seat's labour force to 12,000 and it is investing Pta441.7bn under a four-year plan to make Seat profitable by 1997.

The government's aid package will help towards winding up the old plant, which the Commission states must be dismantled by the end of next year, and the severing of 3,000 more jobs through voluntary retirements.

The Commission said the restructuring measures constituted Seat's "main chance of surviving in the competitive automobile industry" and that under the restructuring measures the company was "achieving substantial progress towards improving its productivity and quality". Under the rules of subsidy authorisation no new production capacity can be created at any Seat plant before January 1 1998.

The solution to the Seat crisis now allows the government to focus on the problems of Iberia where it is hoping to win approval from Brussels to inject fresh subsidies totalling Pta130bn to restructure the airline's capital, and on those of its shipyards, where a viability plan, which also requires the Commission's blessing, involves subsidies totalling Pta205bn.

Iberia's pilots were due to ground most of the airline's flights today in the first of eight 24-hour stoppages to protest against the restructuring programme.

The unions have already agreed to the loss of nearly 40 per cent of the 10,000 jobs in state-owned shipbuilding companies.

Santer's team to follow the boss's new rules

By Caroline Southey in Brussels


Jacques Santer is to assume the power to vet books written by commissioners to avoid further rows

Mr Jacques Santer, the European Commission president, is to assume the power to vet books written by commissioners in an effort to prevent any further embarrassing revelations about the internal workings of Brussels.

The power of veto will be included in a new code of conduct aimed at spelling out what the 20 commissioners can and cannot do. The code, to be drawn up and published within a few weeks, will include a ban on writing articles for publication and on receiving money for speeches. Book writing will be permitted but manuscripts will have to be submitted to Mr Santer before publication.

The new measures follow publicity over a diary written by Mrs Ritt Bjerregaard, the commissioner for the environment, in which she drew heavily from confidential Commission meetings and encounters with European leaders.

Mr Santer, after a personal appeal to Mrs Bjerregaard, secured her agreement that the book should be withdrawn just days before publication, but not before the manuscript had been leaked to newspapers.

The Commission said yesterday the new code was an attempt to "clarify the Commission's internal rules of procedure" and had been welcomed by all commissioners. "What is not understood about the way the Commission works will now be understood," an official said. The code would contain no new disciplinary measures as Article 157 of the Treaty of Rome contained measures to deal with commissioners who were not fulfilling their duties. Under the regulations, the Court of Justice could rule that a commissioner be "compulsorily retired".

The code will spell out the existing ban on accepting payment for speeches and stipulate that any cheques or gifts received be notified to the president and returned or donated to charity. Commissioners will be allowed to accept payment of travelling and accommodation expenses when organisations offer to cover the costs.

"The president informed colleagues that manuscripts should be sent to him first for him to see," the official said. Mr Santer expected commissioners to apply discretion about the internal workings of the Commission. The question of receiving royalties still had to be decided, although Mr Santer was inclined to apply more flexible rules than those covering remuneration for newspaper articles.

Mr Santer would also respond soon to a request by the European parliament that the recently compiled list of commissioners' outside interests be made public.

Portuguese to expect period of austerity

By Peter Wise in Funchal, Madeira

Portugal will have to undergo two years of economic rigour involving a sharp reduction of the budget deficit before the new Socialist government can begin honouring its pledges of social reform, Mr Antóolo Sousa Franco, the finance minister, said yesterday.

Implementing promises to spend more on education, health and welfare too early or capitulating to immoderate wage demands would be to enjoy "a night of drunkenness and then suffer a long hangover", he told foreign bankers in Madeira.

The government, which assumed office on Monday, would impose strict controls over public spending with the aim of reducing the budget deficit from an estimated 5.3 per cent of GDP this year to 4.0 per cent in 1996 and 3.0 per cent in 1997.

The targets, aimed a securing Portugal a place among the first group of countries to adopt a single European currency, are more stringent than had been proposed by the previous Social Democrat (PSD) government, which was defeated in a general election on October 1.

Mr Sousa Franco, a former head of the country's audit tribunal and respected as a stern advocate of fiscal discipline, also vowed to denationalise public sector companies faster than the centre-right PSD, promising to present a programme for "rapid and intensive" privatisation in January, at the same time as the 1996 budget is tabled. He also warned trade unions, who are calling for 1996 wage rises of between 6.5 and 8 per cent, that the government would be prepared to negotiate pay claims only marginally above 3 per cent, the inflation rate he forecast for 1996, down from about 4 per cent this year.

"Now is the moment for austerity. It is not the time for unrealistic demands," he said.

The Socialists, returning to power after 10 years, would keep their pledge not to raise taxes, partly as a means of stimulating growth, the minister said. The unemployment rate would remain stable at about 7 per cent, he said.

Maintaining exchange-rate stability for the escudo was also vital to meeting the convergence targets for the third phase European economic and monetary in 1999 – a challenge Mr Sousa Franco said Portugal could not afford to lose. He said confidence in the escudo was the route to lower interest rates sought by the country's struggling industry. "The continuation of a policy of maintaining exchange rate stability will permit a sustained and consistent fall in interest rates," he said.

His severe approach clearly sought to allay fears that the Socialists' social commitments could be incompatible with fiscal disciple.

Earlier during the conference, Ms Teresa Ter-Minassian, an International Monetary Fund official, said proposed measures such as a minimum guaranteed income and regionalisation could incur substantial additional spending.

New VAT system plans soon

By Emma Tucker in Brussels

Mr Mario Monti, the single market commissioner, told MEPs yesterday he would present ideas for moving to a harmonised VAT system for the European Union "in a few months", despite a quarrel within the Commission over how that move should take place.

The Italian Commissioner's declaration came as Mr Peter Wilmott, one of Brussels' most senior officials, was formally sacked from his high-profile post as the head of the Commission's customs and indirect taxation department.

The controversial dismissal of Mr Wilmott at the instigation of Mr Monti passed as a formality before the 20-member commission and was approved unanimously. His removal means the British government must lobby hard to ensure his vacated Commission post goes to another Briton. Mr Wilmott was one of only three Britons to hold the director-general post, out of 23 Commission directorates.

Mr Wilmott was sacked because of "irreconcilable differences" between himself and Mr Monti. Mr Monti is understood to have been unhappy that Mr Wilmott's department had not carried out detailed analyses of what impact a final, harmonised system of VAT would have on the finances of member states.

But Mr Wilmott argued that the results of such impact analyses would be meaningless, given the extreme complexities involved in switching to a new taxation regime.

Companies in the EU operate under a "transitional" VAT regime in which VAT continues to be levied in the country where goods are consumed. Under the new regime, VAT would be charged in the country where goods originate. This would have the effect of swelling the tax revenues of exporting countries at the expense of net importers.

Mr Monti's declaration yesterday to the European Parliament came as a surprise, as Mr Wilmott's sacking led many to believe there would now be a long delay in proposals for moving to an origin-based system. But Mr Monti said: "I am not one of those people who thinks the transitional system is working so well that we can go ahead with it indefinitely...

"I want to present a full reasoned proposal [on a definitive regime]... We will be able to present a proposal in a few months."

At the hearing in front of the parliamentary committee on economic and monetary affairs, Mr Monti also came under pressure for failing to devise proposals aimed at ironing out problems caused by sharply-varied excise duties charged in different member states.

This leads to cross-border shopping, where people from countries with high excise duties flock to low-duty countries to buy goods such as wine and cigarettes.

Member states are sharply divided on how to set harmonised excise rates. Mr Monti said he hoped next year's inter-governmental conference would consider making excise duties a matter for qualified majority voting, rather than for unanimous approval.

THE FINANCIAL TIMES
Published by The Financial Times (Europe) GmbH, Nibelungenplatz 3, 60318 Frankfurt am Main, Germany. Telephone ++49 69 156 850, Fax ++49 69 596 4481, Telex 416193. Represented in Frankfurt by J. Walter Brand, Wilhelm J. Brüssel, Colin A. Kennard as Geschäftsführer and in London by David C.M. Bell, Chairman, and Alan C. Miller, Deputy Chairman. Shareholders of the Financial Times (Europe) GmbH are: The Financial Times (Europe) Ltd, London and F.T. (Germany Advertising) Ltd, London. Shareholder of the above mentioned two companies is: The Financial Times Limited, Number One Southwark Bridge, London SE1 9HL.
GERMANY:
Responsible for Advertising: Colin A. Kennard. Printer: DVM Druck-Vertrieb und Marketing GmbH, Admiral-Rosendahl-Strasse 3a, 63263 Neu-Isenburg (owned by Hürriyet International). ISSN 0174 7363. Responsible Editor: Richard Lambert, c/o The Financial Times Limited, Number One Southwark Bridge, London SE1 9HL.
FRANCE:
Publishing Director: D. Good, 168 Rue de Rivoli, F-75044 Paris Cedex 01. Telephone (01) 4297 0621, Fax (01) 4297 0629. Printer: S.A. Nord Eclair, 15/21 Rue de Caire, F-59100 Roubaix Cedex 1. Editor: Richard Lambert. ISSN 1148-2753. Commission Paritaire No 67808D
SWEDEN:
Responsible Publisher: Hugh Carnegy 468 618 6088. Printer: AB Kvällstidningen Expressen, PO Box 6007, S-550 06, Jönköping.

Editor: Richard Lambert, c/o The Financial Times Limited, Number One Southwark Bridge, London SE1 9HL.
R

Italian business spurns politicians

By Robert Graham in Rome

Not one of the speakers addressing the nearly 5,000 delegates at this year's assembly of Confindustria, the Italian employers' federation, had a kind word for politicians. The more prominent the figures, the tougher the criticism.

The assembly, held in the hall of the Rimini Fair over the weekend, had chosen as its twin themes: "Latching on to Europe and modernising the country".

The message to the politicians was put bluntly by Mr Marco Tronchetti Provera, head of Pirelli, the tyre and cables group: "We have shown we are able to modernise our companies, while the political class seems incapable of taking us into Europe.... Even the Dini government, composed of bright people, has been able to do nothing because of the politicians."

The tone of the speeches at the assembly underlined a shift in business attitudes. For the first time businessmen and industrialists are not seeking to identify openly with any particular party or political alliance. Rather, Confindustria seems to want to lobby whatever group is in power.

Mr Luigi Abete, Confindustria's chairman, argued strongly for the electoral law to be tidied up so that it fully embraced the first-past-the-post system in order to create two clear competing alliances. But he had no preference for the centre-left alliance headed by the Party of the Democratic Left, or a right-wing coalition.

Today there is no party identified as the party of business. Yet only a year ago, the prevailing mood within Confindustria was strongly in favour of the right-wing goverment of businessman-turned-politician, Mr Silvio Berlusconi.

Rank-and-file members welcomed Mr Berlusconi as a fellow businessman and a symbol of a new broom sweeping away the corrupt practices of the post-war political parties that encouraged a damaging relationship between business and government.

His budgetary proposals also appeared business friendly with tax amnesties, fiscal incentives for investment and a pledge to cut taxes and bureaucracy.

At Rimini it was hard to find anyone with a kind word for Mr Berlusconi who was forced from the premiership last December. His Forza Italia movement, rather than representing the interests of the business community, had proved too much a vehicle for Mr Berlusconi's own agenda.

The brief Berlusconi experience brought home the need for Confindustria to force the parties to clarify their programmes for government well in advance of elections. But, as Mr Tronchetti Provera pointed out, Confindustria's lobbying efforts will come to nothing if parliament lacks the political will to legislate.

Under the chairmanship of Mr Abete, who is due to step down next year, Confindustria has become more actively involved in politics. Mr Abete argued this was essential because policies could no longer be so easily influenced by discreet back-stage deals arranged between the big business and the party bosses. But if the political profile of the federation has been raised, Confindustria has to decide who it represents.

The interests of the big industrial groups, the medium-sized companies and the small family concerns vary enormously. Small companies have traditionally been under-represented. To correct this, there is talk that the successor to Mr Abete could well be someone like Mr Giorgio Fossa, the chairman of the small industrialists.

But the issue of representation is not so simple as size. Geography is becoming an ever more important factor.

The hopes of southern businesses are for improving infrastructure, labour laws and for cheaper credit. In the north, the cry is for less regulation, less government interference and for a more intelligent fiscal system that rewards profit.

EUROPEAN NEWS DIGEST

SPD tries to calm Emu row

Germany's opposition Social Democratic party yesterday moved to defuse the row about a future single European currency by saying that the party would debate a broadly pro-European motion at its forthcoming national congress. Publication of the motion comes after leading members of the SPD had challenged the purpose of monetary union. Mr Rudolf Scharping, the party's leader, said at the weekend that a single currency was "just an idea".

The SPD said yesterday it was "its task as an opposition party to make timely warnings about the risks involved". The motion, which is entitled "We need an economic and monetary union", also warns that the SPD will not press for a single currency "at all costs" because, for "social and political reasons, a policy based on stability is an absolute essential". Meanwhile, Mr Norbert Wieczorek, the SPD's single currency spokesman, insisted that the party's position was "absolutely clear". "If the stability criteria are met, the single currency will come into force on 1.1.1999." *Michael Lindemann, Bonn*

Delays over Berlin government

Mr Eberhard Diepgen, the Christian Democratic (CDU) mayor of Berlin, yesterday held out few prospects of forming a new city government by the end of this month, saying it might be delayed until January.

His remarks are unlikely to reassure the building sector which is investing more than DM11bn ($7.9bn) in new offices in the centre of Berlin, partly in preparation for the government's move from Bonn to the German capital in three years' time. It is concerned that any delay in forming a government after the October 22 elections will add to bureaucratic hurdles in the city. The delay is due to debate within the Social Democrat party (SPD) about whether or not again to form a coalition with the CDU, the largest party, or to try forming a minority government. *Judy Dempsey, Berlin*

French shipping group aid probe

The European Commission has opened an inquiry into alleged French state aid of FFr2.14bn ($430m) to state-owned shipping group Générale Maritime and its parent holding company CGMF.

The Commission said such aid would only be permissible as part of a comprehensive restructuring plan to restore viability, but information so far given by the French government had not provided evidence of such a restructuring.

It said state aid seemed marginally to have sheltered Générale Maritime from commercial market forces by covering the operating deficit. Such aid risked distortion of competition.

Meanwhile, the commission yesterday cleared the proposed merger of Kymmene Corp and Repola Oy, to form Europe's largest pulp and paper concern, subject to conditions. Kymmene and Repola agreed to merge and create a new entity called UPM-Kymmene. The companies agreed to divest part of their paper-sack production capacity in Finland and that UPM-Kymmene's marketing would be done only through its own sales units.

The commission postponed until next Wednesday a decision on whether to approve German subsidies to help Dow Chemical buy a majority stake in German petrochemical group, Buna Sow Olefinverbund. *Agencies, Brussels*

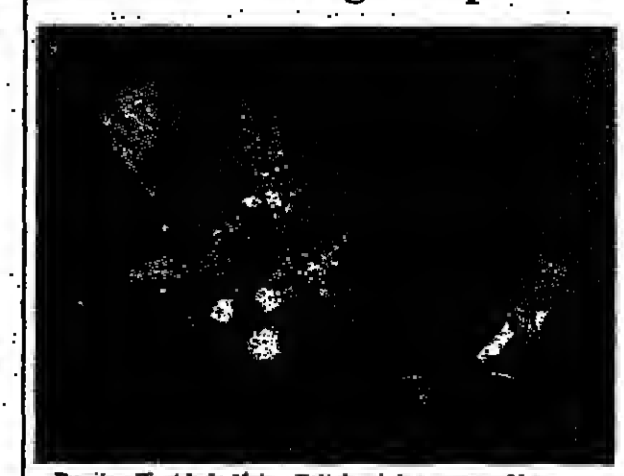
Çiller unveils her cabinet

Mrs Tansu Çiller, Turkey's prime minister, has revealed her new cabinet, following agreement between her conservative True Path party and the centre-left Republican People's party (CHP) to revive their four-year coalition government which collapsed in September over policy disputes. However, the new government is likely to be short-lived because general elections are to be held on December 24.

True Path, the largest party in parliament, dominates the 32-strong cabinet, with 18 members and most of the crucial portfolios. The CHP was given 11 seats.

In keeping with Turkish political tradition, independent bureaucrats were appointed to head the Interior, Justice and Transport ministries to prevent political interference in the organisation of general elections. *John Barham, Ankara*

Yeltsin well enough for politics


Russian First lady Naina Yeltsin givings news of her husband's health at a briefing for journalists in Moscow, also attended by US ambassador Thomas Pickering (right)

Mr Boris Yeltsin, Russia's president, was making a good recovery from the mild heart attack he suffered last week, officials said yesterday, as the Russia leader made his first foray back into political life.

Issuing his first political order since he was taken to hospital last Thursday, Mr Yeltsin asked for an explanation of the government decision over the weekend to ban Russia's second most popular party from participating in December parliamentary elections. Mr Yeltsin's request could signal that the government is preparing to back down over its controversial move, which has been criticised by politicians across the political spectrum. Mrs Naina Yeltsin, the president's wife, and Kremlin officials, said the Russian leader's health was improving. Doctors say he must remain in their care for the next five weeks. *Chrystia Freeland, Moscow*

Walesa rival builds poll lead

Mr Aleksander Kwasniewski (left), leader of Poland's former communists, has drawn further ahead of President Lech Walesa, his main rival, in next Sunday's presidential election. According to the latest opinion poll by CBOS, a publicly funded institute, support for Mr Kwasniewski rose to 32 per cent from 27 per cent a week before and 21 per cent in early September. However, Mr Walesa's campaign is gathering momentum, with 26 per cent backing, from 23 per cent a week before and 12 per cent in September. Mr Jacek Kuron, a former dissident and labour minister who has been campaigning to win the middle ground, had just 8 per cent support. That for Ms Hanna Gronkiewicz Waltz, head of the central bank and a former Walesa ally, has collapsed to just 2.6 per cent. This gave her seventh place in a field of 15 candidates. *Christopher Bobinski, Warsaw*

Clinton warns Bosnia talks may be last peace chance

By Jurek Martin in Washington and Laura Silber in Zagreb

President Bill Clinton yesterday said be would seek "an expresaion of support" from Congress before the US took part in Nato's enforcement of any peace settlement in Bosnia.

He described talks between the leaders of Serhia, Croatia and Bosnia which start today at a military base near Dayton, Ohio, as "mayhe the last chance we have for peace for a very long time".

Success was not guaranteed, he said, and the US could not "impose a peace," which had to be negotiated freely by the parties. But if agreement was reached, "Nato must help to secure it and the US, as Nato leader, must participate."

Using some of his strongest language to date, he said US absence could cause other Nato partners to "reconsider their own commitments" to the alliance, thereby gravely weakening it, adding immeasurably to European instability and increasing the dangers of a fresh Balkan war spreading.

The president spoke the day after the House of Representatives passed, by 315 votes to 103, a non-binding resolution calling for congressional anthorisation to deploy US troops in Bosnia and warning the parties not to count on a US military presence to enforce a settlement.

That vote was attacked by Mr Richard Holbrooke, the chief US negotiator, as an "extremely unhelpful" prelude to the Dayton talks, but Mr Clinton doubted it would have any effect on the negotiations.

His administration has maintained there is no constitutional obligation to win the backing of Congress whenever US forces are despatched into hostile situations overseas. But his comments yesterday recognised the reality that to defy the wishes of Congress could exact a heavy cost.

In a Monday night speech, Congressman Newt Gingrich, the Speaker of the House, did not rule out a congressional vote in favour of US deployment in Bosnia once a satisfactory agreement had been reached.

But he said the House vote should serve as a warning to Mr Clinton that he must first "educate" the US public on his goals in Bosnia and then make the case to Congress that the US "must engage in a process that it does not currently believe in".

Mr Holbrooke had dampened expectations of a breakthrough in Dayton by warning several times that all sides have hardened their positions recently.

Mr Holbrooke's warnings reflect reality as well as psychological tactics. At least one of tha foundations on which the US peace process has been constructed looks distinctly shaky: the Moslem-Croat federation.

If the talks starting today fail to meet its demands, the Bosnian government may scupper negotiations by taking advantage of the sceptical mood among tbe majority Republicans in the US Congress.

Before leaving Sarajevo, President Alija Izetbegovic of Bosnia made plain that he has not scaled back his demands. His government, he said, would insist on the country's territorial integrity. He also called for peacekeepers to be sent to Bosnia's frontiers rather than on current frontlines.

"When it comes to maps we will ask for Gorazde, Brcko, Posavina and a united Sarajevo," he added, referring to land in eastern and northern Bosnia as well as the capital, part of which is Serb-held.

This stance is likely to be bolstered by renewed attention in the western world to atrocities committed by the Serbs who overran the town of Srebrenica in July. Evidence is growing that thousands of Moslem men were killed while fleeing the Serbs.

At a recent meeting, President Franjo Tudjman of Croatia also underlined the poor state of Croatian-Bosnian relations by insisting that, without Zagreb, the Bosnian government could not have taken any land from the Serbs.

The Croats currently hold about a quarter of Bosnia, more than ever before, and there seems little indication that they will hand this over to their Moslem countrymen.

While tha federation, brokered in February 1994, did stop a year-long war between the Moslems and Croats, there has been no other progress in carrying out the agreement.

Of all the participants, President Slobodan Milosevic of Serbia seems most anxious to make a deal in order to win the lifting of sanctions. He will also seek an agreement on the status of Serb-held eastern Slavonia, which Mr Tudjman has threaten to reoccupy by force.

The fall of eastern Slavonia to the Croatian army could prompt np to 150,000 ethnic Serbs to flee into Serbia, further destabilising that country.

The Croatian Democratic Union (HDZ), the ruling party of President Franjn Tujdman, won Sunday's parliamentary elections but has fallen short of the two-thirds majority needed to change the constitution, unofficial results released yesterday abow, writes Laura Silber in Zagreb. The state election commission said the HDZ had taken 44.8 per cent, with 99 per cent of the votes counted. An opposition coalition, led by the Peasant party, finished second with 18.4 per cent; the Social Liberals, previously the second strongest party, won only 11.6 per cent of the ballot.

The HDZ won 10 of the 12 seats earmarked for Croats living outside Croatia, most of whom are from traditionally nationalist western Hercegovina in neighbouring Bosnia. About two-thirds of the 3.6m Croats eligible to vote turned out for the poll, called nearly a year early to exploit the groundswell of popularity for Mr Tudjman after the Croatian army crushed a rebel Serh state in the *Krajina region last August*.

Dutch ex-PM favourite for alliance' al job

Nato nations warm to cool-hand Ruud

By Bruce Clark in London, Peter Norman in Bonn and Ronald van de Krol in Amsterdam

Mr Ruud Lubbers, the former Dutch prime minister and the new favourite to win Nato's top political job, has a reputation for coolness in tense situations.

When a petrol bomb was thrown through the front window of his Rotterdam home, he calmly picked it up and threw it out again. He showed similar *sang froid* in fighting off a man wielding a knife who jumped into his car while he was trying to give a radio interview.

At the Nato headquarters on the outskirts of Brussels, the dangers are not usually so physical – but the need for a cool head will be just as great.

Mr Lubbers, who headed the Dutch government between 1982 and 1994, has moved to the front of the pack after being endorsed on Monday hy the leaders of Britain and France – and yesterday, after some hesitation, by Germany.

He would appear to satisfy the joh description set out a few days ago by a senior US official who said: "What we need is a French-speaking Atlanticist."

A millionaire businessman, devout Catholic and veteran coalition broker, Mr Lubbers is as good a linguist as most of his compatriots – his five languages include French – and his commitment to the transatlantic tie is unshakeable.

In US defence circles, he is remembered as one of the western politicians who faced down the anti-nuclear movement during the 1980s – which was strong in the Netherlands – and accepted the installation of cruise missiles on European soil.

During his final years as prime minister, when Nato had begun its search for a post-cold war role, Mr Lubbers defended the alliance against charges of irrelevance and rejected the idea that Europe could defend itself without US help.

But with typical Dutch common sense, he also accepted tbe principle that Nato was bound to become more European in character, as Washington gradually scaled down the forces it deployed on European territory.

This position places him firmly in the centre of Europe's defence dabate: he is less tempted by the vision of a de-Americanized Europe than certain French politicians, less sceptical abont a European defence identity than certain Britons.

A tall, slim man with a permanent five o'clock shadow, Mr Lubbers combines the intellectual sophistication that comes of a Jesuit education with the stolid work ethic and informal manner of his country.

Partly because of his Catholic background, but mostly because of long experience as a compromise-broker at bome and in Europe, the former prime minister has given rise to a new term in Dutcb political science: the Lubbers confessional. This refers to his technique of bolding private conversations with all parties to a dispute and politely but firmly coaxing out of them some indication of tbeir bottom line.

He is widely credited with being one of the main architects of the Maastricbt treaty of December 1991.

In European affairs, he and his compatriots bave often played a pivotal role: they have a depth of commitment to tbe European ideal wbich reassures tbe Frencb and Italians, and a belief in sound economic management which appeals to the Anglo-Saxons.

The Dutcb ability to act as an bonest broker could be a boon to Nato at a time wben the planned peace implementation force in Bosnia is fraught with the danger of misunderstandings.

Mr Ruud Lubbers: good man in a crisis

Germany's voteless citizens set up their own political party

By Judy Dempsey in Berlin

Germany's 6.8m foreign residents, tbe majority nf whom are disenfranchised, have formed their own political party. It is the first time they have sought to organise themselves politically.

Tbe Democratic Party of Germany (DPD), spearheaded by the country's 2.8m-strong Turkish community, intends to campaign for changes in the electoral system and the country's outdated citizenship law.

"This is a clear signal to the main political parties that they must reform the law," said a spokesman for the Federal Office for Foreigners which has long campaigned for integration of the country's non-German community.

"It is also a signal that the people who bave lived here for years are disappointed their status has remained unchanged," be added.

Under German law, non-Germans are barred from voting in local, state and federal elections. An exception is made for European Union nationals; they can vote in local elections.

Under the 1913 Imperial and Citizenship law, citizenship is antomatically granted provided one of the parents is German, the mother is German in the case of an illegitimate child, or the individuals are *Aussiedler*, that is ethnic Germans from eastern Europe or Russia.

The decision to form the DPD has been taken in the light of the failure by Germany's main political parties over the past two years to agree on double citizenship – not normally allowed – for third-generation children born to non-nationals living in the country. The Office for Foreigners had wanted the automatic right of double citizenship to be granted to children born in Germany and then let them choose their nationality at the age of 18.

Foreigners aged between 16 and 23 years old can apply for citizenship if they have lived in Germany for a minimum of eight years and provided they relinquish their original citizenship. Older individuals can apply for citizenship after 15 years' residence.

"The fact that we have no rights means we are always foreigners despite tbe fact that we pay taxes. And we are easy bait fnr racists," said Mr Sedat Sezgin, a 38 year-old Turkish lawyer and one of tbe founders of DPD. "The current electoral law and the citizenship law is racist."

The DPD intends to develop a state and federal-wide political party. However, under German law, it will not have the right to field candidates unless 51 per cent of its members bold German citizensbip. Less tban 100,000 Turks do so. "Tbis is not an obstacle as sucb," said Mr Sezgin. "The main point is that if the main political parties are not prepared to represent our interests, we will have to do it ourselves."

Canada's referendum hangover

Vote shows ties are thinner than many had assumed, writes **Bernard Simon**

After the closest of close results, Monday's independence referendum in Quebec has left Canadians with little to celebrate and much to contemplate.

The federalist camp, which predicted an easy victory in the early days of the campaign, squeaked through with 50.6 per cent of the vote. The winning margin was smaller than the number of spoilt ballot papers.

The separatists had the consolation of a strong comeback in the closing stages of the campaign. But the glum faces of Yes supporters who gathered in a Montreal hall on Monday evening told the story of a group that has seen its project rebuffed twice at the polls in the past 15 years.

Their bitterness was captured by Mr Jacques Parizeau, the separatist veteran who is the province's premier. Noting that 60 per cent of French-speaking Québécois voted Yes to independence, Mr Parizeau blamed the wealthy and non-francophone immigrants for the defeat. "You roll up your sleeves and you begin all over again," Mr Parizeau said.

The close result is likely to force all sides to confront some sobering realities. Most important, it demonstrated that the threads holding Canada together are more slender than many English-speaking Canadians had assumed.

Monday's vote has increased pressure on Ottawa and the nine provinces outside Quebec to reshape the way Canada functions. Several provincial premiers called yesterday for a devolution of powers from the federal government to the provinces. Some have indicated a willingness to reconsider Quebec's demand for recognition as a distinctive part of Canada. "We have work to do, let's get on with the job," Mr Jean Chrétien, Canada's prime minister, said on Monday night. The cabinet spent most of yesterday mapping future strategy.

But getting it done will not be easy. Mr Chrétien, just a month ago the most popular prime minister in Canadian history, has been severely wounded by the referendum campaign and the close result.

Even before the votes were counted, rumblings of discontent had surfaced in his Liberal party caucus. The prime minister faces criticism for not paying enough attention to national unity issues since he took office two years ago, and for projecting an air of misplaced complacency during the referendum campaign.

> 'We have work to do, let's get on with the job' – Jean Chrétien, Canadian prime minister. The cabinet spent most of yesterday mapping future strategy

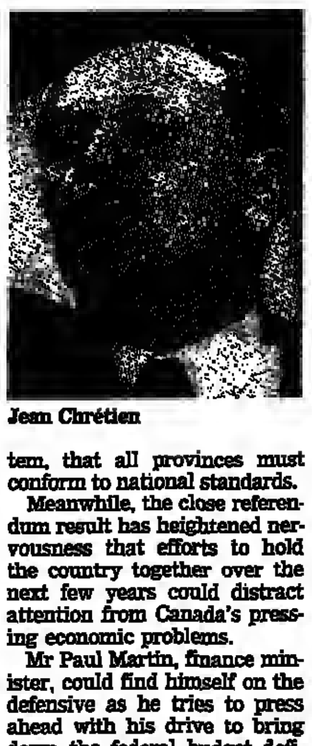
Although Mr Chrétien is himself Québécois and represents a Quebec constituency in Parliament, the campaign proved his role as a staunch defender of Canadian unity in the bitter constitutional battles of the 1980s damaged his credibility in the French-speaking province.

By far the most effective politician on the federalist side was Mr Jean Charest, the youthful and personable leader of the Progressive Conservative party, which ruled Canada for nine years to 1993.

Mr Charest holds one of only two Conservative seats in the House of Commons. But his referendum performance has enhanced his party's chances of a comeback, and ensured that he will play a significant role in efforts to keep the country together.

Although there is now widespread agreement on the need for greater decentralisation, putting words into practice will not be easy. The English-speaking provinces have so far balked at enshrining any special treatment for Quebec in the constitution.

Decentralisation could itself raise some highly charged issues. For instance, some politicians have suggested wider provincial powers in healthcare. But this could undermine a basic tenet of Canada's widely admired healthcare system, that all provinces must conform to national standards.



Jean Chrétien

Meanwhile, the close referendum result has heightened nervousness that efforts to hold the country together over the next few years could distract attention from Canada's pressing economic problems.

Mr Paul Martin, finance minister, could find himself on the defensive as he tries to press ahead with his drive to bring down the federal budget deficit. Mr Martin has pledged to narrow the deficit to 3 per cent of gross domestic product next year, from 5.4 per cent in 1994/95, and provide two-year rolling targets thereafter.

Several important deficit-cutting initiatives, notably unemployment insurance and pension reform, were put on ice in the run-up to the referendum. Mr Chrétien caught many of his followers by surprise with a blunt promise in the stressful closing stages of the campaign that Québécois pensions would remain intact.

On the other side of the political fence, the pro-secession government in Quebec is likely to reject any offer to renew the federation, and to seize every opportunity to show that the Franch-speaking province would be better off as an independent country.

Separatist leaders made it clear after the votes were counted on Monday that the referendum was not the last word on independence. "The next time could come more quickly than we believe," said Mr Lucien Bouchard, the driving force behind the separatists' strong showing.

However, the separatists also have their weak spots. Their ranks are divided between hard-liners, such as Mr Parizeau, and moderates, who might react favourably to a new deal that would keep Quebec within Canada. In its preoccupation with the independence campaign, the ruling Parti Québécois has all but ignored Quebec's deep-rooted economic problems.

Quebec has made the least progress among the 10 provinces in improving its fiscal situation. Its 1994-95 budget deficit reached 4.1 per cent of gross domestic product, compared with 3.7 per cent in neighbouring Ontario, which suggests Mr Parizeau could have trouble keeping his referendum promise to maintain generous social programmes without a rise in taxes.

The referendum has left all Canada's politicians with much work to do. As Mr Charest put it, "we need to inject some confidence in our capacity to bring about change".

Most Canadians, whatever their political stripe, hoped that Monday's vote would provide a clear direction for their country. However, it appears instead to mark the beginning of a new, bumpy road with some potentially hazardous twists and turns.

Canada after the vote, Page 15; Lex, Page 16; Stock markets report, Back page; Capital markets report, Page 26

President Bill Clinton "made clear our views, that our relationship with a strong and united Canada should continue. . . he believes in the need to manage ethnic differences because ethnic diversity can be the hallmark of a strong and prosperous society."
White House press secretary Mike McCurry

"We note the outcome of the referendum. We value a strong, united Canada as a long-standing friend and ally. It is now time for all the people of Canada to look ahead together and build on this result."
British Foreign Office

"The voting result shows the tradition and strength of the democratic process in Canada. A majority of voters in Quebec have voted for unity and for the federal system."
German Foreign Ministry

"France takes note of the result of this consultation. . . it plans quite naturally to confirm and develop the direct and preferential relations which link it to Quebec, an essential partner in the francophone world."
French Foreign Ministry

"The francophone cause emerges victorious. . . one sees that the French language merits passion as much in North America as in North Africa or Lebanon. I was even going to say is it worth dying for."
Maurice Schumann, former cabinet minister under General de Gaulle

"People who are strangers to Quebec in heart and spirit have swayed the scales."
Jean-Marie Le Pen, French National Front leader

"The nightmare that Quebec has experienced could so easily happen to Scotland."
Scottish Tory chairman Sir Michael Hirst

"The Queen does not make statements about this sort of thing."
Buckingham Palace

Narrow victory leaves all frustrated

The frustrations of a long, bitter referendum campaign and a razor-thin decision were written on the faces of thousands of commuters hurrying to work in Montreal and throughout Quebec yesterday.

Many of Quebec's 7m population had watched the referendum unfold on television. By 9.30pm the Canadian Broadcasting Corporation forecast a narrow win for the No to independence camp.

A hush fell on 2,000 pro-independence campaigners gathered to Montreal's convention centre as the Yes's early lead evaporated, and tears began to flow. Mr Jacques Parizeau, Quebec's premier and a veteran campaigner for independence, was seen pacing in an upper level box, a glass in his hand. It was clear by 10pm the No side would win.

In another meeting hall nearby federalist militants managed only moderate cheers, putting the best face possible on their narrow victory, talking of reconciliation and change.

Then Mr Parizeau, alone on the podium in the convention centre, and without a word of thanks to his chief supporters or Mr Lucien Bouchard, de facto leader of the separatist campaign, blamed "money and the ethnic vote" for the Yes side's loss. An eyewitness reported that some supporters immediately walked out, with moderates on both sides accusing Mr Parizeau of using inflammatory words.

Later hundreds of young supporters of the two campaigns clashed with police on Montreal's main shopping street, with several brawls, a dozen shop windows broken and 35 arrests. In the early hours of the morning a petrol bomb was removed from the Federal Liberal party headquarters in Montreal.

But in Quebec City and other towns, the streets were deserted by 1am. Even to Montreal, everything was cleaned up by 4am.

Defeated separatists demonstrate their frustration Reuter

However, the bitterness and uncertainty left by the vote will take longer to resolve.

"Canada and Quebec are now so divided among themselves that I wonder if anything will ever change," said Mrs Marie Pelletier, a Montreal theatre director, expressing the frustration of young Yes supporters. "Canada is like an old picture banging in an old frame. We, the people of Quebec came so close this time."

But advertising salesman Mr Andre Simard, said: "Half of the 60 per cent of Francophones who voted Yes don't really want independence, but change that will give Quebec more decision-making powers. They don't want to break up Canada."

The Quebec labour unions officially supported the Yes side, and a clear majority of French-speaking factory workers voted Yes. Many were disappointed by the defeat.

English-speaking workers, who must use French at the workplace, were mostly silent supporters of the No side. Many are immigrants and smarted under Mr Parizeau's "ethnic vote" taunt. Mr Max Bernard, president of the Canadian Jewish Congress which has formed a joint committee with Greek and Italian groups in Montreal, said Mr Parizeau's words were "highly inappropriate". Other ethnic leaders called for an apology.

Mr Yves Laforest, a professor at Laval University in Quebec City, summed up the feelings of moderates on both sides: "The French-speaking majority of Quebec feels it is a people and a nation and it wants to be accepted as such by Canada. There can no longer be 10 equal provinces."

Robert Gibbens

Clinton to discuss debt extension

By Jurek Martin in Washington

President Bill Clinton and the Republican leadership in Congress will this afternoon sit down in the White House to discuss a temporary extension of the federal debt ceiling designed to avoid a default by the US government on its financial obligations.

But Mr Clinton was not prepared to start negotiating on the details of the budget bills passed by both houses last week because, according to Mr Mike McCurry, the White House spokesman, "the Republicans have indicated no willingness to take up the president's priorities".

Both Senator Bob Dole, the majority leader, and Congressman Newt Gingrich, the Speaker of the House, have demanded this week that the president become personally involved in the debt ceiling negotiations.

It was Mr Dole who suggested today's meeting in a Monday night telephone call to Mr Leon Panetta, the White House chief of staff. Until now, Mr Robert Rubin, the treasury secretary, has been the principal administration negotiator, although his approach has been sharply criticised by the two Republican leaders. Nevertheless, at Mr Dole's request, Mr Rubin will also take part in the White House talks.

The treasury secretary has pressed for an $85bn extension of the current $4,900bn ceiling until the start of next year to allow the US to meet its bills while the confrontation over the budget is resolved.

But Senator Pete Domenici, chairman of the budget committee, said Mr Rubin's proposal was "not on the cards". Instead, he recommended a much shorter extension – to November 29 – to increase the pressure on the administration to accept the Republican budget bills.

It is becoming increasingly clear that Congress will be unable to resolve differences between the two houses' budget bills, which also include reforms of federal health insurance and welfare and a $245bn cut in income taxes, by mid-November, when the debt ceiling is certain to be breached, or even by the Thanksgiving holiday 10 days later.

Mr Clinton is also due to be out of the country twice in the last half of this month. First he is off to Japan for bilateral talks and a summit of the Asian and Pacific Economic Co-operation forum. Then he goes to Ireland, Britain and Spain, for talks with the European Union. It is unlikely, though just possible, that one or both of these trips could be cancelled.

The president has repeatedly threatened to veto the legislation whenever it reaches his desk. Only then is he willing to start hard bargaining over the details, though it is perfectly possible that today's talks will stray into the budget arena.

The administration yesterday did announce its support for one part of the budget package – the $13bn annual transport bill. This embraces substantial reforms of the Federal Aviation Authority.

Falklands would gain from oil taxes

By David Pilling in Port Stanley, Falkland Islands

Britain would receive no direct financial benefit if oil were discovered around the Falkland Islands. All tax and royalties would go straight to the Falklands government, according to Mr Andrew Gurr, the islands' chief executive.

The Falklands, a British dependency with a population of 2,100, last month launched an oil licensing round in London and Houston after the UK had reached an accord with Argentina. Argentina has agreed not to block exploration efforts around the islands, over which it fought a war with Britain in 1982.

Although the British Treasury would not benefit from oil revenue, Mr Gurr said island councillors had made it clear that, "should we become wealthy, we would be prepared to pay for our own defence". Britain spends an annual £68m ($107.4m) to maintain 2,000 military personnel on the islands, about half a per cent of the UK's defence budget.

Another senior official said privately that, although under the British constitution the Falklands were not obliged to pay London a penny, "if we were sitting on a Kuwait we might revise our policy". Falkland islanders, under the shadow of Argentina's continued sovereignty claim, were keenly aware of the importance of courting British public opinion, he said.

On the question of economic benefits for Argentina, Mr Gurr said the Falklands did not accept the right of Buenos Aires to levy fees on oil companies operating around the islands. He conceded that some companies, especially those already operating in Argentina, might pay. Those with no planned ties to Argentina could well ignore its royalty demands, he said.

Nevertheless, when bids are opened next July, the Falklands government would be keen to award exploration licences to consortiums containing Argentine companies. "I think we would, all else being equal, favour Argentine participation because it would provide stability to the whole process. Argentina would be less likely to interfere if their companies were involved."

The Falklands does not plan, however, to lift its ban on Argentine visitors. Business people from Argentina – even members of consortiums with exploration licences – would not be welcome.

As for how the fruits of possible oil revenues might be shared, the government "did not believe that islanders should make quick money". Any cash handouts would be carefully controlled.

OJ trial prompts formal review of California courts

By Christopher Parkes in Los Angeles

California's courtroom procedures, including the use of television cameras and jury selection methods, are to be formally reviewed as a result of the controversial year-long murder trial of Mr OJ Simpson.

The policy-making California Judicial Council has asked a committee of eight judges, court administrators and public attorneys to report next May in a move which seems mainly intended to restore public faith in the jury system.

"Half the people in the state think the jury process does not work and we have to respond to thet," said Mr Charles Calderon, a state senator and a member of the council.

The review committee's wide-ranging brief, which includes requests for possible changes to legislation and the state constitution, is a clear indication of the depth of concern in both judicial and legislative circles.

Governor Pete Wilson of California sent a written request for a review on the same day the Simpson trial jury returned its not-guilty verdict after less than four hours' deliberation.

Although leading legal anthorities have warned against "knee-jerk" reactions to the special circumstances surrounding the Simpson case, and its allegations of double murder against a popular black sporting hero, the controversy has rumbled on undiminished.

Several judges have since exercised their right to ban television cameras, which were widely blamed for encouraging excessive drama in the Simpson case from witnesses, counsel and even the judge.

The case also gave added urgency to a review already under way of jury procedures, which may have more telling longer-term effects than curtailing lawyerly antics.

One possible change likely to prove popular with all except defence specialists would be an end to the right of peremptory challenge to potential jurors, which, opponents say, would rednce lawyers' ability to "load" juries according to race or other factors.

Mr Calderon suggested that jury summonses, which are often ignored by those concerned at the possible loss of income should be enforced more strictly.

Other ideas include the introduction of majority verdicts in all trials except for first-degree murder and others carrying the death penalty.

Governor Wilson's request for a judicial review also proposed a ruling on whether lawyers should be allowed to make political statements in court. Mr Johnnie Cochran, who led Mr Simpson's defence, was widely criticised for apparently suggesting the jury should send a message to the white community by liberating his client.

AMERICAN NEWS DIGEST

US confidence remains strong

US consumer confidence remains "reassuringly strong," the Conference Board, a New York business analysis group, said yesterday.

Its confidence index fell slightly to 97 in October against 97.3 in September. However, the index was eight points higher than in the same period last year when the economy was growing robustly. The latest reading pointed to "healthy economic growth" said Mr Fabian Linden, a Board spokesman.

Separate data indicated employment costs remain unusually subdued. The employment cost index – a broad measure including fringe benefits as well as wages – rose 0.6 per cent in the third quarter, less than expected. The annual increase of 2.6 per cent was one of the lowest on record.

Labour costs seemed firmly under control in spite of a low unemployment rate partly because employers succeeded in holding down growth of fringe benefits. Benefit costs rose 0.4 per cent in the third quarter – less than half the increase in the same period last year, and 2.2 per cent on an annual basis. The deceleration mainly reflected declining health insurance costs for employers. Figures yesterday also showed new homes sales up 3.3 per cent in September, following a sharp drop in August.

Michael Prowse, Washington

Latitude for chief executives

Chief executives should be given wide latitude providing they have shown solid financial performance, according to a survey of US institutional investors. It also found strong opposition to limits on compensation in the event of contracts being ended. The survey, Redefining Corporate Governance, was carried out by Russell Reynolds, an international head-hunting organisation. It spoke to 33 institutional investors and 206 fund managers.

Mr David Shellard, managing director of Reynolds Russell in London said: "One of the most interesting things in the report is the view that non-executive directors should take a much closer interest in the active management. I also noted that the US investors favour non-executive shareholders holding shares."

Stewart Dalby, London

Pemex starts plants sell-off

Mexico's state oil monopoly, Petróleos Mexicanos (Pemex), has formally begun privatising 61 secondary petrochemical plants. The income generated by the privatisation, which is expected to be completed by next July, will be assigned to Pemex's investment budget.

Daniel Dombey, Mexico City.

هكذا من الاصل

NEWS: WORLD TRADE

EU threatens pact on trade disputes body

By Guy de Jonquières in London and Frances Williams in Geneva

The World Trade Organisation's efforts to establish new machinery for settling international trade disputes have been threatened with further delay by a last-minute EU demand for changes in the draft list of candidates for the WTO appeals tribunal.

The demand, conveyed to trade diplomats in Geneva yesterday, is expected to anger other WTO members and could undermine an outline compromise designed to end intense political wrangling over the geographic balance of the seven-member body.

The main obstacle has been insistence by the EU and the US thet each have two seats on the body, which will hear appeals to judgments on trade conflicts handed down by WTO disputes settlement panels.

Washington has recently indicated that it would be prepared to accept only one seat, provided the EU did the same. However, Sir Leon Brittan, the European trade commissioner, has been unable to persuade EU governments unconditionally to drop their demand for a second seat.

The EU Council of Ministers decided in Luxembourg on Monday evening that it would scale back its claim only if adjustments were made in the geographical distribntion of candidates proposed by the WTO committee charged with salecting members of the appeals tribunal.

The EU is also seeking assurances from the WTO that it will not exclude the possibility of two European members being chosen to sit on the tribunal in the future.

The conditions were set at the insistence of France and Belgium, which had urged the Commission to continue its campaign for a second seat. Only Britain, Germany and Sweden said on Monday that they were ready to accept the list of candidates proposed by the WTO selection committee.

"The EU negotiators have been duped," Mr Hervé de Charette, France's foreign minister, said after the council meeting. "Having only one seat for the EU, when we represent 45 per cent of world trade against only 17 per cent for the US, is neither fair nor normal."

Though the EU council did not specify the changes it was seeking, France and some other EU members are said to believe that the proposed composition of the appeals body is too heavily weighted in favour of Asia and Australasia.

The selection committee's proposal would give the region three seats, occupied by nominees from Japan, the Philippines and New Zealand. The other members would be drawn from the US, the EU, Uruguay and Egypt.

The EU is expected to argue that one of the candidates from tha Pacific region should be replaced by a candidate from another part of the world.

The EU council said that, if other WTO members failed to meet its demands, it would discuss the issue further at its next meeting on November 10.


Hervé de Charette: 'EU has been duped'

China to end tax break on imports

By Tony Walker in Beijing

China plans to phase out tax exemptions on imports of capital equipment for ventures involving foreign investors from the beginning of next year, but a final decision has not been made.

Mr Xiang Huaicheng, deputy director-general of the state administration of taxation, said that new projects would probably lose tax exemption from January, but "this decision has not finally been taken by the central government."

Speaking at a meeting in Beijing of the Geneva-based World Economic Forum Mr Xiang said: "This is a complex issue, it depends if it is an old or new project." Earlier, Mr Sun Shangqing, a senior official, had said tax breaks for imports of equipment would definitely be phased out.

"We will abolish the (tax exemption) policy as from next year," said Mr Sun, who is director of the development and research centre of state council, or cabinet.

China, in its efforts to attract foreign investment, had provided tax breaks of up to 50 per cent on capital equipment imports, but is now reviewing preferential tax policies across the board.

This follows pressure from struggling state-owned enterprises disadvantaged by preferential policies for foreign investors and from inland provinces starved of investment which favoured special economic zones in coastal areas. The new rule would not affect contracts already signed and the move was in line with World Trade Organisation principles that call for equal treatment of all companies.

Chinese officials have been talking of eliminating the disparity between foreign and local investors and the possibility of reducing tax advantages enjoyed by China's five special economic zones and Shanghai's Pudong area.

Bnt Mr Xiang said there would be no change in the preferential tax status of the zones in the "short-term". These benefits include tax free holidays and other advantages denied investors elsewhere in China.

China is also rationalising its value-added tax rebate system after widespread abuses contribnted to a build-up of Yn55bn ($6.63bn) in arrears owed to claimants.

Fraud forces tighter transit checks

By Frances Williams in Geneva and Charles Batchelor in London

Checks on the TIR system for international road transport are to be tightened in a move to combat an unprecedented wave of customs fraud linked to organised crime.

The growth of smuggling in Europe, estimated to cost customs revenues billions of dollars a year, now threatens the survival of the 20-year-old TIR transit regima, according to the United Nations Economic Commission for Europe (ECE) which administers the TIR convention.

Under the TIR scheme, which will have 58 members next year, trucks once loaded are sealed and the TIR carnet allows them to pass with the minimum of red tape to their final destination.

The International Road Transport Union (IRU), which is responsible for operating the TIR system, was forced last December to suspend the issue of carnets for alcohol and tobacco consignments because insurers would no longer cover the cost of tax and dnty payments for goods "disappearing" en route. The new monitoring system, to be introduced hy the end of the year, aims at a daily information exchange between customs authorities on all TIR carnets presented to them.

Tha ECE says this will enable virtually every consignment using the TIR regime to be tracked along its journey, allowing fraud to be rapidly detected and giving insurers the data they need to make an accurate assessment of risk.

Mr Richard Turner, policy director of the UK Freight Transport Association, welcomed the introduction of a computerised system of handling TIR carnets. He hoped it would be in place by the target date but noted there had been problems in getting systems running in eastern Europe.

The FTA, which represents transport companies, did not expect an early resumption of alcohol and tobacco shipments under the TIR system.

The new information system will replace an *ad hoc* arrangement introduced last summer between the IRU and Societé Générale de Surveillance (SGS), the Geneva-based international inspection group. This was considered unacceptable by many governments and it has proved burdensome for hauliers, who are obliged to discharge TIR carnets at a few selected customs posts where SGS can check the contents of their trucks.

The ECE is already discussing moves to strengthen the convention itself.

Israel signs first Gulf Arab deal

By Julian Ozanne in Amman

Israel yesterday signed its first large commercial deal with a Gulf Arab state with a memorandum of intent to buy Qatari liquefied natural gas through Enron, the US energy company. The deal also marks the emergence of Qatar as a player in Arab-Israeli business opportunities and regional integration.

Sheikh Hammad bin Jassim bin Jabr al-Thani, Qatar's foreign minister, said his country was determined to join the peace process, but believed it premature to establish even minimal formal diplomatic links until Israel achieved greater progress in peace talks with Syria and Lebanon.

The natural gas deal is one of the largest regional commercial projects. The agreement between Israel and Enron committed both sides to negotiate and complete a LNG sale and purchase agreement within 180 days. Under the proposed deal, Israel would buy at least 2m tonnes of natural gas a year, worth about $400m, from Enron which is developing part of Qatar's north field.

The gas would be liquefied and ahipped to a terminal either on the Red Sea or the Mediterranean where it would be converted back to gas. In the next six months both sides must negotiate price and political risk insurance.

Yesterday's deal is part of a larger Qatar-Enron project to exploit 5m tonnes of natural gas for export to India, Israel and Jordan with total investment of between $5bn and $5.5bn.

Sheikh Hammad said several other commercial deals had been discussed in Amman, and the Gulf state yesterday presented 22 development projects, ranging from steel pipes and cement to petrochemicals, to investors at the summit.

Qatar also said it had set up a $250m private holding company to finance development and industrial projects in the West Bank and Gaza Strip.

WORLD TRADE NEWS DIGEST

Research patent for biotech group

A US biotechnology company has been granted a patent it claims will give it comprehensive rights over a new method of drug research. Pennsylvania-based 3-Dimensiohal Pharmaceuticals has been issued with a process patent covering computer-controlled combinatorial chemistry, a system in which millions of potential drugs can be screened rapidly for potential as a new drug.

Mr Raymond Salemme, chief executive, acknowledged the possibility of legal action as drugs companies tried to protect their technologies from the patent. Most of the world's top drugs companies are developing combinatorial chemistry – which can be used to create thousands or millions of different chemicals – in an effort to improve productivity in one of the most labour intensive parts of the industry. They are also working on rapid screening of such materials.

3Dimensional Pharmaceuticals' patent covers the computerisation of the link between the screening process and the creation and selection of drugs for screening. The company claims that the patent will affect the chemicals industry, especially agrochemicals, paints and fragrances. It has also filed for patents in Europe. *Daniel Green, London*

Airlines to raise compensation

Airlines meeting at the annual meeting of the International Air Transport Association in Kuala Lumpur, yesterday endorsed lifting compensation limits for death or injury to passengers in airline accidents.

The airlines agreed thet compensation levels would in future be based on the standards prevailing in the passenger's country of domicile. Compensation levels at present range from $10,000 to $150,000, depending on such circumstances as where the ticket was purchased.

Mr Pierre Jeanniot, Iata director general, said: "Our carriers have long recognised that the limits were unrealistically low. But governments have been unable to agree on amending the applicable international law, so the airlines are now taking action to modernise the liability system."

The new agreement is scheduled to come into effect next November but this could occur later as it requires government approvals. *Michael Skapinker, Aerospace Correspondent*

EBRD to invest in Croatia

The European Bank for Reconstruction and Development is to make its first direct corporate investment in Croatia. The bank is lending $20m to Pliva, a Croatian pharmaceuticals producer, and is injecting DM60m ($43m) in a convertible debt investment to take an eventual 11 per cent equity stake.

The Croatian government is planning to sell a majority stake in Pliva to domestic and foreign investors. ft has appointed Zagrebacka Banka and Union Bank of Switzerland to co-ordinate a domestic and international public share offering in the first half of next year. Pliva is increasing its capacity and is to build a plant to produce of Azithromycin and other antibiotics. Azithromycin, a prodnct of the group's own research for which it holds the worldwide patent, is licensed to Pfizer in the US for sale under the brand name Zithromax. It is also sold in east Europe under the name of Sumamed and is used to treat infections of the upper respiratory tract. *Kevin Done, East Europe Correspondent*

■ Motorola of the US will set up a venture with Panda Electronics of China to develop, produce and sell computer systems based on PowerPC microprocessors. Motorola will hold a 60 per cent equity investment. *Reuter, Beijing*

UK Foreign Office protests over 'flawed judicial process' for minority rights leader

Anger at Nigeria death sentence

By Paul Adams in Lagos

A special tribunal set up by Nigeria's military regime has sentenced to death minority rights leader Mr Ken Saro-Wiwa for alleged involvement in the murder of four local politicians by a mob in their native Ogoniland last May.

Three others were also sentenced to death. Five others received death sentences on Monday.

In London, the Foreign Office condemned the death sentences. "We deplore the death sentences passed on Ken Saro-Wiwa and his co-defendants following a flawed judicial process," a spokesman said. Britain also asked the Nigerian leadership to commute the sentences.

A British lawyer observing the trial earlier this year, for the human rights group Article 19, concluded that the special tribunal was biased in favour of the prosecution and said the evidence against Mr Saro-Wiwa from a parallel trial of another nine accused of the same murders amounted to double jeopardy.

Mr Saro-Wiwa's son Ken Wiwa called for the Commonwealth, which meets in New Zealand next month, to expel Nigeria from the organisation.

Mr Saro-Wiwa is a popular playwright who, as leader of the Movement for the Survival of the Ogoni People, became the most militant campaigner for minority rights since Nigeria's civil war in 1967.

Although he insisted it was a peaceful movement, he advocated secession and confronted an increasingly repressive military regime over one of the most explosive issues in Nigeria: the rights to oil revenue.

Mr Saro-Wiwa's hardline approach to the government and oil companies caused bitter divisions with the more moderate traditional rulers in Ogoniland, including the four murdered, who advocated dialogue to get a better deal. The youth wing of Mr Saro-Wiwa's movement, which was intolerant of local dissent, sparked the riot which led to the deaths of the four Ogoni chiefs last year.

The Ogoni are among 20 ethnic groups who make up the 6m people living in the Niger delta. This oil-producing area in south-east Nigeria provides more than 90 per cent of the country's exports and 80 per cent of government revenue, but has received no benefit from the mineral wealth and has allegedly suffered environmental damage from oil operations in the rain forest and swamp region.

The Ogoni campaign has accused the army of carrying out attacks on Ogoni villages, leaving hundreds dead and thousands displaced since August 1993, and has accused Royal Dutch Shell of collaborating. Shell denies any part in the violence. It says that the disputes should be resolved peacefully and more revenue should be invested in the oil-producing areas.

Ms Anita Roddick, founder of the Body Shop retail chain, yesterday called on Shell to condemn the death sentences. Ms Roddick, a friend of Mr Saro-Wiwa, said only Shell has sufficient clout with the Nigerian government to have the judgments overturned.

Ms Roddick said Shell was privately "appalled" at the events in Nigeria. The company should join the public condemnation of the trial, she said. Shell last night said it could not interfere with the local legal system. Demands that it use its "influence" with the Nigerian government were "dangerous and wrong," it declared. The company also believes that outside observers over-estimate its ability to influence events in Nigeria.

Ken Wiwa: 'Expel Nigeria'

In 1992, the Ogoni gave an ultimatum to Shell, the Nigerian government and Chevron, which also has concessions in Ogoniland, to pay \$4bn in oil royalties and \$6bn as compensation for environmental damage or cease operations. The oil companies have withdrawn from Ogoniland.

See Letters, Page 14

Emissions action urgent, say Germans

By Peter Norman in Bonn

Global carbon dioxide emissions must be reduced by 1 per cent a year for more than 150 years if the world is to avoid an intolerable increase in temperature, the German government's panel on global environment change warned yesterday.

The advisory body, made up of scientists and economists, said it was not too late to save the global environment from "irreversible catastrophe". However it warned that if emissions continued to grow at their current rate the climate would be economically and ecologically unbearable in about 25 years.

After presenting the panel's latest annual report to the Bonn government, Prof Horst Zimmermann, chairman of the group, said the global mean temperature only had to rise by 1.3°C from the present average of 15.3°C before the upper level of the "tolerance window" for the "preservation of creation in its present form" had been reached.

The programme of reducing CO_2 emissions should begin after a transitional period of five years. Even with temperature increases of about 0.2°C per decade, the social and economic costs of adapting to global warming and repairing the damage caused by it would reach 5 per cent of gross global product.

The panel said international agreements on climate change needed to be enacted and strengthened. Its report called, in particular, for joint implementation by industrialised and developing countries of pledges to reduce CO_2 carbon dioxide emissions. In this way, industrial countries would meet some of their own commitments to cut CO_2 carbon dioxide emissions by financing reductions in developing nations.

Prof Zimmermann said Germany had a special responsibility as "a global player" to devise and implement policies to solve global environmental problems. It would be an important step forward if the German motor industry succeeded in producing cars which consumed only 3 litres of fuel per 100 kilometres.

The panel urged all countries to increase awareness of the environment and reduce pollution at home. It also called for greater efforts to combat poverty.

The panel's report mirrors many of the concerns and preoccupations of the German government. At last month's annual congress of the Christian Democratic Union, Chancellor Helmut Kohl voiced concern about global warming and called on all countries to join Germany in an urgent initiative to save densely populated regions from the threat of storms, floods and drought.

MIDDLE EAST AND NORTH AFRICA ECONOMIC SUMMIT

US voices optimism over development bank

By David Gardner and Julian Ozanne in Amman

The US said yesterday there was widespread support for the Middle East development bank, in spite of opposition from a large majority of European Union member states and reticence among Gulf nations.

The bank was given the green light at the end of the three-day Middle East and North Africa economic summit in Amman.

The meeting marked a step forward from last year's Casablanca summit, the first attempt to build economic foundations for the still evolving Arab-Israeli peace process, and a number of cross-border deals were completed, including an agreement for Qatar to supply liquefied natural gas to Israel.

It was nevertheless overshadowed by political tensions, in particular over the future status of Jerusalem, and the speed of "normalisation" of Arab-Israeli relations while the Jewish state has yet to reach peace accords with Syria and Lebanon.

The Bank for Economic Co-operation and Development in the Middle East and North Africa is to be set up in Cairo within two years, capitalised at about \$5bn, with a quarter of this paid-in by future members, and the rest in callable shares.

Ms Joan Spero, the US undersecretary of state for economic affairs, said yesterday there were indications already that "over 70 per cent of the capital will be subscribed". She said several Gulf states would take shares in the bank, although Saudi Arabia and the United Arab Emirates have been hostile to it.

"We are deliberately leaving a number of the shares open," Ms Spero said, for those EU states "which have not said yes, but which have not said no." Only Italy, the Netherlands and Ireland among EU member states favour the new institution, with the rest preferring a facility which would identify viable projects and tap into existing multilateral lenders, which, they say, have the finance if the projects are there to be funded.

Ms Spero said Germany, France and the UK were sitting on the fence. She expected the EU to follow the US lead once the bank came into being. Although the EU is gearing up to pour around \$13bn into the region over the next five years, the US has proceeded on the basis that Europe would follow the American lead once the bank – sought by Egypt, Israel, Jordan and the Palestinians – "becomes a reality", as Ms Spero put it.

Meanwhile, Mr Yassir Arafat, chairman of the Palestine Liberation Organisation, denounced the recent US Congress votes to move the US embassy in Israel from Tel Aviv to Jerusalem as "a very dangerous precedent which will destroy the peace process". Mr Shimon Peres, the Israeli foreign minister, said of the emotive issue of Jerusalem, that "politically it is closed", although negotiations on the future of the city are not due to start until next May.

The Egypt-Jordan row rumbled throughout the summit, after Mr Amr Moussa, Egyptian foreign minister, warned against "rushing" into links with Israel before Syria and Lebanon had been brought into "a comprehensive peace", an independent Palestinian state was established, and the status of Jerusalem was settled.

King Hussein rebuked him publicly, arguing sardonically that since Egypt had made peace with Israel in 1979, Jordan was now "running" to seize the opportunities of peace, which it sealed with Israel last year.

Mr Dennis Ross, the US Middle East mediator who, along with Mr Warren Christopher, US secretary of state, met Israeli Prime Minister Yitzhak Rabin in Amman on Sunday and Syrian president Hafez al-Assad in Damascus on Monday, warned that there are "still differences on substance and procedure" between the two sides.

Qatar-Israeli deal, Page 5

Reform of markets key to Arab capital needs

By David Gardner

The Arab world needs to open, reform and integrate its capital markets if it is to attract anything like the flows of private capital it needs to compete internationally, and begin reaping the dividends of the peace with Israel now taking shape.

This was the near unanimous conclusion of senior businessmen, fund managers, and regional market operators and officials at a series of workshops on capital market development at the Middle East and North Africa (MENA) economic summit in Amman.

The summit, backed by the US, Russia, the EU and Japan, yesterday announced plans to set up a regional development bank, along with regional business and tourism councils. But government and business leaders at the gathering recognised that likely flows of official aid, development loans, and remittances from expatriate workers would not come anywhere close to matching the region's capital and financing requirements.

The World Bank, in a report out last week, said the region's deficit financing requirements alone were the highest of any developing region, and three times those of Africa and Asia in the Mashreq, or eastern Arab world. Yet the region as a whole attracts less than 1 per cent of total private capital flows into developing countries, and about 0.3 per cent of portfolio investment. The Bank estimates that Arab capital amounting to \$350bn is held outside the region.

Mr Percy Barnevik, president and chief executive of ABB, the electrical engineering multinational with \$5bn turnover in the MENA region, said there was "a need for massive private investments" over the next 10 years, including more than \$60bn in power generation, and \$100bn in oil and gas development.

Aid contributions would be marginal against the hundreds of billions of dollars required, he said, estimating that at least 30 per cent of investment in infrastructure would have to come from the private sector.

As yet, however, there has been very little privatisation of infrastructure and utilities, offering few financing opportunities to the private sector, whereas the World Bank calculates that the amount of infrastructure in emerging market capitalisation elsewhere has grown to around \$300bn.

Total capitalisation of Arab stock markets now amounts to around \$88bn – nearly half of that in Saudi Arabia – against roughly \$1,000bn in the world's 38 emerging markets, and about \$45bn in Israel, according to a leading Saudi economist. All markets in the region, saving Israel and now Jordan, are classified as "pre-emerging", one Arab economist said.

Jordan, along with Tunisia, Morocco and to a lesser extent Bahrain and Oman, have opened up their markets to foreigners. But the region's economies remain largely closed to each other; there are few intra-market links which might add depth and liquidity; the corporate bond market is virtually non-existent; and with the exception of Jordan, Arab countries are resistant to country credit ratings which would help upgrade their markets.

The region's markets for the most part lack transparency and adequate information on listed companies, and need independent regulatory bodies and sounder legal frameworks for investors. "Have you ever tried to go to court in any Arab country today?" asked a leading Arab fund manager. "You would have to wait 10 years" for a result.

The Casablanca stock market's decision this week to delist eight companies for lack of transparency was welcomed in Amman. But overall, as Mr Barnevik pointed out, what is lacking in the region is "the freedom to control investments".

Long-term, lower cost equity finance will not be available without much faster liberalisation and integration of the region's markets, according to one former stock market chief at the summit. He said he was optimistic about the medium to long term, but that "in the short term there is no way they can cater to the magnitude of the region's needs".

MIDDLE EAST CAPITAL FLOWS (\$m)

	Foreign direct investment 1990-92	Euromoney 1995 country risk rating (0-100)	Capitalisation of local equity market 1993	Planned privatisations
Egypt	482	46	2,922	23
Morocco	303	52	1,876	112
Saudi Arabia	283	72	51,000	n/a
Tunisia	190	62	46	n/a
Syria	67	29	n/a	n/a
Jordan	22	46	4,734	1
Algeria	8	36	n/a	1
Bahrain	-8	70	5,600	n/a

Source: World Bank

CONTRACTS & TENDERS

NOTICE OF SUBSTITUTION OF PRINCIPAL DEBTOR

CENIBRA

Celulose Nipo-Brasileira S.A. - CENIBRA
(incorporated under the laws of the Federative Republic of Brazil)

U.S.\$ 200,000,000

9.375 per cent. Guaranteed Fixed Rate Notes due 2003 (the "Notes") unconditionally and irrevocably guaranteed by

Companhia Vale do Rio Doce

(incorporated under the laws of the Federative Republic of Brazil)

Notice is hereby given that, in accordance with Clause 13.3 of the Trust Deed dated December 21, 1993 constituting the Notes (the "Trust Deed"), with effect from the close of business on December 14, 1995, CVRD will be substituted as the principal debtor under the Trust Deed and the Notes, CENIBRA will be discharged from any further obligations under the Trust Deed and the Notes and CVRD will be discharged from any further obligations under the Guarantee (as defined in the Trust Deed).

By: Companhia Vale do Rio Doce

November 1, 1995

هكذا من الأصل

US-Japanese security pact reaches turning point today

Okinawa protest has astonished officials, writes **William Dawkins**

The US and Japan reach a turning point today in attempts to assuage growing public criticism of their joint security pact, seen by both governments and their neighbours as the foundation of east Asian security.

Mr William Perry, US defence secretary, arrived in Tokyo yesterday and will today meet senior officials and politicians to discuss the future of US troops in Japan. This comes in the wake of the largest public protests against the US military in tha 50 years in which it has been stationed there. The security pact will be the main point on the agenda when President Bill Clinton meets Premier Tomiichi Murayama in Tokyo on November 20.

Until recently, the leaders of the world's first and second largest economies were on track to confirm the solidity of their security treaty, under which the US keeps 44,000 troops in Japan, nearly half the 100,000 soldiers stationed in east Asia.

The first joint review of the pact, carried out by officials over the past year, had concluded US forces were as vital as ever to guarding the stability of the world's fastest-growing group of economies, despite the collapse of tha US-Japan alliance's original raison d'être, the Soviet Union.

Five decades after the end of the second world war, Japan still has a largely token army, a legacy of its US-designed pacifist constitution. So it relies on the US for protection, in return for an annual payment of $5bn (£3.1bn), about 70 per cent of US military costs in Japan.

Japan's ruling coalition yesterday drafted a plan calling for a reduction of US military facilities in Okinawa, writes William Dawkins in Tokyo. The proposal, which coincides with talks today between Mr William Perry, US defence secretary, and Japanese officials, is intended to placate Okinawan objections to the US presence, provoked by the alleged rape of a schoolgirl by three US servicemen.

It calls for the US and Japan to set a firm deadline for implementing an existing accord to reorganise, but not reduce, 10 military installations, and to return three more to local landowners. Prime Minister Tomiichi Murayama is to present the scheme to Mr Masahide Ota, governor of Okinawa, on Saturday, in an attempt to persuade him to renew leases on US occupied land there.

Harmony was upset by the Japanese public outcry created by the alleged rape, in September, of a schoolgirl in the southern island of Okinawa, host to 24,000 soldiers and three-quarters of US military installations in Japan.

The passions unleashed by the rape, allegedly by three US servicemen, have astonished officials on both sides. For the first time, the Japanese public has called the security pact into question, following which the US defence department is considering redeploying some of the forces in Okinawa elsewhere in Japan.

Mr Perry is reluctant to do this, on the grounds, he argues, that the island is one of the three elements of US security in the region, along with South Korea and the Japanese mainland.

Public support for the treaty fell from 59.8 per cent in August, a month before the alleged incident, to 43.5 per cent in October, according to an opinion poll by the Nihon Keizai Shimbun newspaper.

An anti-US military rally in Okinawa attracted, police said, 58,000 people, including delegates from the traditionally pro-US Liberal Democratic party, dominant member of the government coalition. The LDP kept well clear of the last anti-US demonstration of similar size in Tokyo when the first 1952 treaty was renewed in 1960.

In part, the protest is special to Okinawa. Many islanders resent the Tokyo government, 1,000km to the north, just as much as the perceived intrusiveness of the US military.

The Imperial Army used the island, the argument goes, as a frontier to defend the mainland in the second world war, and since then Okinawa has shouldered more than its fair share of the national defence burden. By some, Tokyo is held to blame for the deaths of 150,000 islanders (one in four of the then population) in tha US invasion of Okinawa 50 years ago.

A reminder of Okinawans' anger came only last week, when an appeal court confirmed a suspended prison sentence on one resident who had publicly burned a Japanese national flag, on the ground that its use was unfairly forced on locals. But the protests over Okinawa, joined by many mainland Japanese, are also a wide indicator of Japan's growing sense of national identity, perhaps even nationalism.

Other symptoms of that are Japan's toughness in trade disputes with the US, the recent election of the hardline Mr Ryutaro Hashimoto as president of the LDP, Japan's application for permanent membership of tha United Nations Security Council, and the discreet behind-the-scenes role it is taking in promoting trade co-operation in east Asia.

At establishment level, this new assertiveness is diplomatic and, for the most part, friendly to the US. "For the past four decades, Japan's Asian policy has been a part of US Asian strategy. It is high time for us to think about being independent, yet complementary. We should continue to support the US strategy towards Asia because we need the US military, political and economic presence," Mr Kazuo Ogura, deputy foreign minister, explains.

William Perry: reluctant to redeploy forces elsewhere in Japan

The official line, on both sides, is US forces are needed if only to guard against flare-ups of local tensions, such as in the Korean peninsula or the South China Sea, where the Spratly Islands are claimed by six neighbouring countries.

Unlike post-cold war Europe, Asia lacks regional security organisations, beyond tha Asaan Regional Forum. Launched last year, the ARF groups the seven countries of the Association of South-East Asian Nations (Indonesia, Singapore, Malaysia, Thailand, the Philippines, Brunei and Vietnam), the US, China and Japan in a loose dialogue on regional politicis and security. Moreover, Japan's Asian neighbours welcome the US presence as guarantee against a feared Japanese military expansion.

But the Okinawa incident, as shown by Mr Perry's arrival in Tokyo, has made it hard for policymakers to claim that official reasonableness reflects Japanese public opinion.

Worse, time is running out, in that Mr Masahide Ota, governor of Okinawa, has refused to renew leases on US occupied land, some of which end next March. That is close to the likely date of a general election, in which an anti-US military ticket would be a vote winner. The plot began as a local drama, but has begun to spin out of control.

Australian deficit creeps up to A$1.57bn

By Nikki Tait in Sydney

Australia's current account deficit increased slightly in September, to A$1.574bn (£760m) seasonally-adjusted, against a revised A$1.524bn deficit in the previous month. But it still remained less than half the record A$3bn-plus figure seen in May.

Merchandise exports fell 2.5 per cent for the second month running, due to lower non-rural exports, while sales of farm products rose almost 1 per cent. Mechandise imports fell more sharply, by 3.7 per cent.

The deficit was only marginally higher than the market had anticipated; many dealers were more interested in the outcome of the Quebec vote on separation from Canada, which has had a significant impact on the Australian dollar.

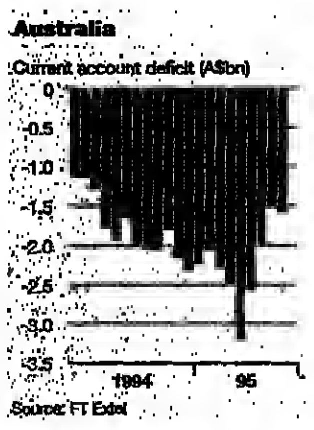
The latest data encouraged some economists to cut their estimates for the current account deficit in the 1995/96 financial year. In its May budget forecasts, the government suggested A$27bn, which it now admits will be revised downwards. Private-sector forecasters think the figure could be A$20bn-A$22bn.

The recent improvement in the current account did not prevent opposition politicians attacking the latest figures.

"What is most concerning...is that we are now building in a deficit of A$1.5bn as the price for the mountain of foreign debt and foreign ownership built up under this government," Mr Peter Costello, shadow treasurer, said.

● Speculation increased yesterday about the date of the impending federal election in Australia, prompting the prime minister's office to deny a December 9 date was about to be announced.

Later, Mr Simon Crean, employment minister, said he believed the election would be held after Christmas, "but it's really in the hands of tha PM". An election has to be held by May. To date, the prime minister has indicated it will be in 1996.



Enough to give Australia grey hairs

Nikki Tait on the battle over control of an expanding pension pool

In most countries, a battle between institutional investors and directors over corporate governance is likely to be confined to the corporate arena. Not in Australia.

Earlier this month, no less a person than Mr Paul Keating, the prime minister, intervened in a dispute surrounding Coles Myer, the country's biggest stores group. The country's fund managers, he declared in parliament, were "donkeys" and "lemmings" and he questioned their ability to make good investment decisions.

Mr Keating's intervention followed allegations that Mr Bill Kelty, an official at the powerful Australian Council of Trade Unions, had threatened to remove union funds from the AMP Society, Australia's largest life office and one of the institutional investors that led a successful revolt against Mr Solomon Lew, Coles chairman. (Mr Kelty denied making such threatsbut correspondence published subsequently demonstrated the extent of his concern.)

"It was an incredible intervention by the prime minister and the ACTU in the affairs of a company," said a Sydney-based bank executive. "It wouldn't happen anywhere else."

Perhaps not – but it seems likely that Australians can expect more.

As Australia's pension industry grows exponentially, the issue of who controls the money and how it should be invested seems likely to raise its head repeatedly.

In 1983, when most workers relied on government-funded pensions – called superannuation locally – and less than 40 per cent had any entitlement, the amount of money under management was about A$30bn (£14bn at today's exchange rate). Today it is A$190bn, and more than 85 per cent of workers have some private-sector coverage.

To date, the growth has come mainly from employer contributions to private sector funds. From 1997/98, however, workers will also be required to chip in.

In an effort to boost the country's household savings ratio (savings as a proportion of disposal income), which is at an all-time low, as well as diminish the future public sector pension burden, the government has stipulated that a minimum 3 per cent of earnings must be paid into a superannuation fund. These employee contributions will be phased in over a three-year period starting in 1997/98. As an added indncement, there will be dollar-for-dollar government matching of contributions for lowest-paid workers.

The Treasury says the changes will push up tha pool of superannuation money to A$500bn by the year 2002 (or about 65 per cent of gross domestic product), and to A$1,800bn by 2020.

This amounts to a huge shift of financial flows within the economy and subsequent investment decisions by funds of this magnitude could have big implications for local capital markets and industry policy. The key political question is who will control the funds' purse-strings and where will the money go?

Towers Perrin, the pension consultants, make the point that, once the employee contributions kick in, Australia's superannuation system will be unique. Not only will government-mandated savings be directed into the private sector, but the government itself will be contributing (through the matching arrangements). This would seem to give the authorities some say in where the money goes.

Also, a significant proportion of this money will flow into big "industry" pension funds. While these are usually managed professionally their trustees are typically drawn both from employer and union ranks – with the result that the latter can also claim substantial say in pension funds' investment decisions.

At present, industry funds account for 10 per cent of the pension fund pool, but this is projected to grow to 15 per cent by 2002.

Already, different agendas have been apparent. The ACTU, citing Scandinavian experience, has talked of the need to "raise levels of productive investment decisions with macro-economic strategy", and has put particular emphasis on infrastructure.

Industry and fund managers have tended to place their faith in market mechanisms, arguing that money should be allowed to chase the highest return. But even the Australian Chamber of Commerce and Industry has acknowledged that distortions are likely to emerge: "Capital is being removed from regional Australia, and being centralised in very large aggregations, usually in Melbourne and Sydney. How does a small business in Burnie or Rockhampton borrow back the funds which have been taken from them as part of their employees' superannuation guarantee contributions?"

The Coles Myer case is not the first where the different viewpoints have surfaced. Earlier this year, Pacific Dunlop, a large Melbourne-based conglomerate, abandoned efforts to diversify into the processed food sector and sold off its poorly-performing food assets to a couple of foreign-owned food groups.

The government, concerned that any hopes of establishing an export-oriented processed food industry in Australia were being undermined, was not pleased. Nor was the ACTU, fearful of job losses. Both hit out at fund managers for pressing Pacific Dunlop to show a return in too short a time frame.

The prime minister has made clear that policy changes, aimed at boosting investment in small and medium-sized businesses, are planned – possibly via an industry statement next month. A revamped "Development Australia Fund", which aims to attract around A$500m of superannuation fund money for investment in unlisted equities and infrastructure, was launched this week. Another possibility is a "second board" equity market for the technology stocks which Australia has a poor record of developing.

With an eye on the "blue collar" vote, Mr Keating has also indicated that the "super issue" will be a key element in the debate during the federal election campaign next year.

"It is something the government of Australia has to be interested in, because we are developing a very large pool of saving and we need the investment.... Fund managers cannot simply buy blue chip stocks when the annual report is about to come along, and then sell them six weeks later."

ASIA-PACIFIC NEWS DIGEST

Japanese jobs outlook worsens

Japan's unemployment rate remained at the record high of 3.2 per cent in September, the government said yesterday, but economists warned it could rise. The jobless rate coincides with the weakest labour market in nine years. The number of jobs available per 100 workers fell from 61 in August to 60 in September, the worst since 1986. Previous falls have heralded a rise in unemployment.

Employment overall rose by 0.7 per cent, or 450,000 jobs, to 65.3m in the year to September. The number of people seeking work grew much faster, so the total unemployed rose by 9 per cent, or 180,000 people to a six-month high of 2.2m, the management and co-ordination agency said. If the US definition of discouraged workers, people who would take a job if a suitable post existed, is included, Japan's jobless rate exceeds 9 per cent, Tokyo economists said. Manufacturers shed jobs through early retirement and a recruitment freeze, cutting 320,000 posts in the year to September, down on the 500,000 lost in the year to August. *William Dawkins, Tokyo*

Industry output up 11% in India

Industrial production in India rose 10.9 per cent in June against the same month last year, and by 13.3 per cent for the April-June first quarter compared with a year ago, figures released this week show. Output of capital goods and consumer durables rose by just over 20 per cent in the quarter, compared with last year's figures; consumer goods output rose 15 per cent. Of 20 selected industrial sectors, only the textiles industry retreated in June over output levels a year ago; growth in food products reached 22 per cent in the month. *Mark Nicholson, New Delhi*

Tokyo and Beijing settle aid deal

Beijing and Tokyo set preliminary terms yesterday for a final $1.41bn (£892m) instalment of a six-year aid package, indicating that Japanese concerns over China's nuclear testing had abated. The two sides signed a letter under which Japan will finance 11 development projects, including expansion of Beijing's airport and a water-supply project in drought-stricken areas. The year's third and final tranche of concessionary credits has a value of Y141.4bn (£880m) repayable over 30 years at a 2.3 per cent annual interest. The entire six-year package spanning 1990-1995 is worth Y810bn.

China this year detonated two nuclear devices in the Lop Nur Desert, prompting Tokyo to say it would freeze most grant-in-aid until Beijing stopped tests. Tokyo's move was largely symbolic because it did not affect the huge yen-loan package, which forms most of its aid to China. *Reuter, Beijing*

Simex reform panel reports

A panel appointed by the Singapore International Monetary Exchange to recommend reforms in the wake of the collapse of Barings, the UK merchant bank, earlier this year said Simex needed to upgrade its trade-clearing operations and establish new rules to assure that customer funds, including margin money, are always protected. The group also said the exchange should establish confidential information-sharing arrangements with other exchanges, a reference to problems Simex had in communicating with the Osaka futures exchange in the days before the Barings collapse. The panel comprised six prominent futures industry executives including Mr Jack Sandner, chairman of the Chicago Mercantile Exchange, and Ms Wendy Gramm, former chairman of the Commodity Futures Trading Commission. *Laurie Morse, Chicago*

ADVERTISEMENT

A REVIEW By UniForum UK - The independent membership forum for IT professionals

Profiting from Open Solutions

UniForum UK Wednesday **November 1** 1995 UniForum UK

Servers & Networks - The next generation

Hewlett Packard, Novell and SCO are co-operating to produce a single high-volume UNIX with integrated NetWare and Enterprise Services, that will support both Intel and a future jointly developed HP and Intel 64 bit processor and be scaleable from the largest multinational down to small businesses. It means that about 75* percent of current UNIX users are already on the roadmap to this bright future. Many significant businesses in the world today use NetWare and UNIX. They can now look forward to more powerful and manageable computing because the three main components of client/server computing - clients, network, and servers - are becoming standard. Servers using industry standard UNIX linked by industry standard networking to industry standard desktops.

Industry-standard here means having around 75 percent of a market. Novell has around 75 percent of the local area networking market, SCO, Novell and HP directly and indirectly enjoy that proportion of the UNIX market, according to IDC, and Windows enjoys a similar dominance on the desktop. The three legs of the client/network/server triangle are equally firm and combine to form a solid, stable structure.

Every NetWare customer will be able to add combined UNIX/NetWare servers to their LANs and enjoy the best file, print and application serving from one system. The great wealth of UNIX applications - tens of thousands of UnixWare, SVR4 (System V Release 4), SCO and HP-UX applications - will be available to NetWare customers. UNIX customers will have a greatly extended set of applications to choose from. They will also get enhanced NetWare Services as well as enhanced client integration through SCO's Windows to UNIX integration strategy. Application developers will be able to produce applications to reach a huge single market instead of the fragmented markets they have today.

What makes this even more exciting is that HP and Intel are working together to combine HP's enterprise server and workstation chip architecture, PA-RISC, with Intel's current architecture. Another generation of the HP chip will be followed by a combined chip compatible with the existing chips yet much more powerful. Reaching beyond even the staggering power of today's 32-bit chips this device will be 64-bit, like the PA8000 due next year, and capable of addressing even larger computing problems.

The existing SCO OpenServer and Novell UnixWare products will be merged into a single high-volume Intel-based product and shipped in 1997. It will adhere to existing UNIX standards and be available to other computer vendors. In collaboration with SCO, HP will then lead the development of its then existing 64-bit UNIX to incorporate the merged UNIX and support the HP/Intel chip.

The plan is that the merged high-volume UNIX product will be tightly integrated with NetWare services and provide the same functionality as a native NetWare system according to HP's D'Costa who says, "the performance of NetWare applications and services will be equivalent to native NetWare."

Users will be able to have applications that treat server and network as a single entity. Customers will be able to manage and use multiple UNIX systems within a single standard environment. Developers will at last be able to produce applications using one interface to gain access to virtually the entire UNIX market. Computer systems vendors will be able to sell competing systems under a single standard. Everyone should benefit.

But there have been many vendor alliances before now which have come to nothing. Why should this one succeed? Bernard Hulme, SCO's senior VP Europe, gives one reason: "This isn't another of those not-for-profit alliances between vendors. It's based on a substantial business transaction and is most definitely geared to the growth of all three companies". Another is that the three players are each leaders in their fields:-

- Novell leads the local area networking market,
- HP leads the RISC system market with a 32.7 percent market share*
- SCO leads the UNIX server market with a 34% market share.

(See pie chart)*

All three partners have a broad industry presence; from small businesses to global enterprises. Thus Novell are present in LANs across the world. HP, a $25 billion corporation, provide enterprise-class servers and is set to lead the workstation market as well as being a major player in the PC market. SCO provide shrink-wrapped UNIX for over 300 different models of computers. In addition to their recognised dominance of the small and medium business application server market SCO also have a major presence in the corporate businesses with thousands of business-critical servers installed in NATO, NatWest and Ulster banks, Halfords and Dixons stores and more going into GM dealerships across Europe. This business transaction truly draws on a combination of strengths with each partner contributing from, and concentrating on, their core competencies.

Industry support has been positive. Oracle's vice president for UNIX products, Richard French, says: "This relationship will create a standard high-volume UNIX platform for business-critical computing that is very attractive to Oracle and should be to all application developers." Gartner Group analyst Scott Winkler thinks: "SCO [has] acquired a significant increase in legitimacy and market position." Dataquest analyst Roger Fulton comments: "This is great news for SCO ...Novell and NetWare Services on HP-UX - Good news again ...HP looks great in this deal."

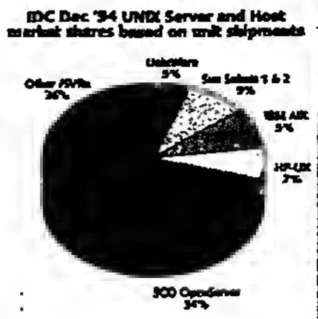
The UNIX market has taken a major step forward which addresses both the need for a unified UNIX standard and a clear client/server framework. A de facto standard exists for the client desktop and the way is now clear to an equivalent standard for network services and servers.

Business is moving towards 24 hour electronic commerce which means more computers in the frontline. The critical servers behind them have to be resilient, powerful, able to grow. This triple alliance will help focus computer industry investment into these areas, away from re-inventing wheels and the proliferation of non-standard systems.

Developers can concentrate their skills on building the applications the whole market wants and needs instead of wasting effort supporting a wide variety of client/server platforms. Customers will get a much wider choice and better value for money. It's what competition based around standards is all about and virtually every business in existence today will benefit.

Pictured at the HP, Novell and SCO announcement in London on 21 September 1995.
LEFT: Graeme Allan, Novell's Marketing Relations Director for Europe, Middle East and Africa.
CENTRE: Bernard Hulme, SCO's Senior Vice President and Managing Director for Europe and International.
RIGHT: Carl D'Costa, Hewlett Packard's European Marketing Manager for Unix systems.

IDC Dec '94 UNIX Server and Host market shares based on unit shipments



Data Warehousing- The time has come

By Neil Urquhart, Open Systems Group Europe, Hitachi Data Systems

The clamour of interest and excitement about data warehousing is growing steadily louder. As the shouts of the client/server lobby subside, so the promoters of data warehousing take their place in trying to get the attention of the long-suffering (and in danger of becoming deaf) corporate IT decision-maker.

But what are the data warehousing advocates really saying? Could it be that all this excitement is actually about issues which have long been facing corporate IS managers?

Surely there has always been a need to store, access and utilise masses of corporate information. At least, that is what our customers have been telling us.

Our industry has been historically fuelled by rapid advances in technology being bought-up by eager customers looking for the illusive edge over the competition brought by better and faster process automation. Now, the emphasis has shifted.

While technology still advances at a rate of knots, our customers are now primarily interested in capitalising on the real value in their information systems: Harvesting the information itself. They know that, at their core, their businesses depend upon innovative products and excellent service, and on bringing these products and services to market even more effectively. Of course, one of the key elements in outstanding performance is information, and the ability to use it.

But is there anything new in that? Ten years ago didn't the open systems lobby begin telling us the same thing? What was needed, they said, was easy portability of applications across different hardware platforms. But this alone was not enough.

Then came client/server and its promise of harnessing the power of distributed systems through enterprise-wide networks of departmental or branch systems, each meeting a 'local' need while being linked into a corporate whole.

Client/server has been symptomatic of the rise of the power of the executive computer user. Innovation and marketing are all about creating and executing well-researched strategies, so the executive demands masses of information to enable better decision-making. While client/server has been successful in providing desktop access to information, and clear visualisation of it, it offers no solution for real-life warehouse operations.

What is it that is making data warehousing concepts an achievable reality?

One difference is that the level of the argument has risen. Our customers are no longer concerned so much with the choice of operating system or the complexities of porting an application from one environment to another. They now recognise that it is the data itself which must exist in an 'open' environment.

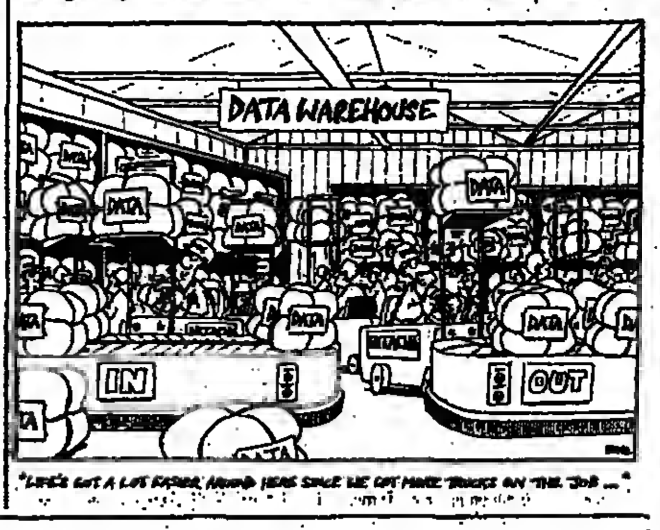
Open systems and a multi-vendor computing environment are today's reality. All large organisations must wrestle with the challenge of integration and inter-operation if they are to capitalise on their suppliers' strengths. So these organisations have learned the hard way that the first and most important degree of 'openness' must be at the level of the information itself. If they are to make the most of it and deliver the marketing benefits demanded by today's businesses, IS Managers must be able to store and process data in the most effective way, making it available to decision-makers across the organisation.

A second difference has been due to technological innovation and especially the emergence of parallel processing technology, in both hardware and software, that can process vast amounts of data in a realistic timeframe. In reality, this means terabytes of data which need to be loaded, unloaded, processed, backed-up and maintained. Without the power of parallel processing, this task would simply take too long.

In fact, the concept of mass storage, access and manipulation of huge amounts of data is nothing new to us at Hitachi Data Systems. For a long time, our customers have benefited from this approach to organisational IS issues. And we are continually innovating the hardware, software and services we need to provide the solutions. The pendulum of progress is swinging back towards the corporate IS manager. And they are ready.

The key point now is that organisations' insight and maturity in attitude about the value of data has collided with the super-powerful massively parallel technology which is making possible, and practical, the wide-scale data storage and manipulation needed to enable enlightened business decisions.

Data warehousing is a concept whose time has come. Having lived with it for a long time, we realise that it needs the fresh approach that parallel processing offers. With understanding and experience, and the power of this new technology, we can make this concept real.



External Information: Essential for Business Strategy

Professor Gautam Mitra, Chairman, UNICOM

New developments in IT and communication technologies, together with the ever-decreasing time-cycle of their transfer to products and services, bring threats as well as opportunities. Established medium to large businesses need to assess the impact of new technology in respect of their competitive positions; while small yet entrepreneurial companies seek out new opportunities. Despite occupying different positions in the business and marketing battlefield, these diverse organizations have a common need for external information. Today, no organization can prepare a business strategy without digesting some, if not all, aspects of technology, market and regulatory information. UNICOM, as a purveyor of high quality (business-to-business) information products covering public courses, multi-speaker seminars, specialist technology evaluation reports, is a highly regarded information service provider to the industry. UNICOM's researchers are not only seeking out leading edge technologies - they are also assessing the full business impact of these technologies. The seminars are specially designed for maximum interaction and benefit. Thus technology overview presentations are backed up by research and development summary statements. Consultants and other value-added service providers describe their products and services, while end-users relate their experiences in the form of case studies. Most events are complemented by related exhibitions. An open forum of discussions by these groups of professionals spark new ideas while retaining balance and moderation in the critical appraisal of the technology, markets, threats and opportunities.

By inviting leading specialists from Europe and the USA, and through its collaboration with professional bodies such as ACM, BCS, and IDPM, UNICOM comprehensively covers the global as well as the professional scene.

Events Include

- IT Investment Strategy 21-22 November 1995
- Object Developments '95 4-8 December 1995
- Global Information Access: *Computing, Telecomms and Multimedia Convergence* 19-22 February 1996
- Information Systems Solutions 25-29 March 1996

Reports Include

The DataWarehouse;
Client/Server Systems;
Object Databases;
Object Tools: Datamining.

Phone: 01895 256 484
Fax: 01895 813 095
email: unicom @ unicom. demon. co.
browse: URL:http: //www. demon. co.uk/unicom
for quality information from UNICOM.

Avro International
a division of British Aerospace

When Avro International, a subsidiary of British Aerospace decided to overhaul its IT facilities, with the eventual aim of replacing all its mainframe systems, Compuware's UNIFACE was chosen as the company's standard development environment. UNIFACE is being used both for customising a newly-acquired UNIX manufacturing package, Manufacturing Total Management System (MTMS) from the BEC Group, and for other applications.

With headquarters in Woodford, Avro assembles and markets the 70-120 seat family of RJ Avroliner Regional Jet aircraft. Recently the company went through a significant re-organisation and consequently inherited a varied array of systems and hardware at this site.

"We have a real mix of hardware, so wanted something flexible enough to run both in client/server and in terminal-host mode and to support both character-based user interfaces and GUIs. UNIFACE's ease and speed of use, together with portability, influenced our choice. We saw that a product as portable as UNIFACE would provide 'future-proofing' by making us independent of any specific type of hardware," said Brigid Quinn, Technical Project Manager for the MTMS implementation.

Perhaps the most important deciding factor, though, was UNIFACE's unique Application Objects Repository, which Quinn sees as a 'glue' allowing various elements, packaged and custom-built, to be integrated.

UNIFACE will be used to fill functionality gaps not included in MTMS, including the re-design of a screen for entering engineering data and operator booking on the shop floor.

Avro believes this will be one of the major UNIX manufacturing installations in Europe, with 400 separate access points to the system and 120 simultaneous users.

Quinn says, "We want to have our cake and eat it; to choose the best off-the-shelf products, to tailor them to our requirements, and yet to avoid becoming version-bound. That's exactly what UNIFACE will help us to do."

Open Systems Management That Is Pure Poetry

When compared to the relative simplicity of mainframe system management, the management of large heterogeneous networks can take on nightmare proportions. MIS managers must cope with diverse databases, operating systems and business applications, while their personnel spend so much time fire fighting, that they have little time left for actually managing the system as a whole. There are myriad solutions for separate pieces of the puzzle, but nothing that addresses the whole picture. PLATINUM *technology*, a leader in open systems management, has now defined an evolving vision and strategy for the future of open enterprise management systems.

The Platinum Open Enterprise Management Systems architecture is a comprehensive design to solve the enterprise systems management problem. POEMS is intended to address the key issues which must be solved in today's heterogeneous networked enterprise computing systems. POEMS provides the means to integrate a wide set of systems management products, supporting a common user interface among the product set. It provides a common infrastructure by which systems management software may cooperate, a single management interface across the product set, and utilises a coherent security model. The POEMS architecture spans the range from centrally managed mainframe systems to networked open systems computers, and from lower layer network management problems up through the enterprise's data warehouses.

A key characteristic of POEMS is its open character. POEMS is a modular architecture, permitting the various components, from PLATINUM *technology*, third parties, and those developed within the enterprise, to be delivered and installed as they are ready. The various interfaces by which PLATINUM *technology* products are integrated with the console, the common infrastructure, the event management layer, etc, are all available to other product vendors, so that their products may participate in POEMS. PLATINUM *technology* is committed to maintaining this open character, and to use this approach to assure that the very best solutions to systems management problems are incorporated into the POEMS architecture.

For more information, please call PLATINUM *technology* on 01908 248400.

BA and ILOG- The Centres of Excellence

By Steve Lacey, Board Director, ILOG UK Limited

British Airways is the world's favourite airline. It is also one of the most profitable and posted a pre-tax profit of £452 million for the financial year to 31st March 1995. How does BA intend to continue this trend whilst facing the onslaught of world-wide competition?

One way has been to use ILOG's resource management and scheduling software to optimise airport utilisation. BA has chosen ILOG to supply a state of the art aircraft stand allocation system, which will optimise the allocation of aircraft through dynamic scheduling techniques.

Kevin Fallon, project manager BA, comments: "Improving customer service through utilising our resources more effectively is essential to maintain our competitiveness. ILOG has achieved a major step forward in optimisation and scheduling software. This software will enable us to schedule dynamically the allocation of planes to terminal gangways and ensure that our levels of customer service continue to improve well into the future."

ILOG's Business Development Manager for Transport, Peter Chaplin adds: "To see BA achieve so much in such a short space of time is very gratifying. With BAA and the CAA also planning to use our technology it has the potential to become an industry standard for this type of application. Our lead in scheduling technology is a direct result of EC funded initiatives." Chaplin continued: "It has resulted in our software solving problems that were impossible before. We are confident we can schedule in the most complex, logistical situations, from planes and people, to trucks and trains."

ILOG UK Limited,
L'Avenir, Opladen Way,
Bracknell, Berkshire, GU2 5YH
(Tel: 01344 42 66 66)

Fifth year of UniForum UK's Open Systems Guide & Directory

This month sees the publication of UniForum UK's fifth edition of its Open Systems Guide & Directory.

With over 800 listings, it is the most comprehensive, independent guide available. This year's guide contains over 100 pages of valuable market information, including standards, specifications & definitions, systems, products and services as well as a detailed listing of suppliers and their address and telephone numbers.

Place you order by faxing +44 (0) 181 332 0448.

Cost is £17.95 per copy. Access or Visa welcome. Cheques made payable to UniForum UK.

هكذا من الأصل

London and Manchester in tussle to build £100m national arena

Stadium race narrowed to two

By Patrick Harverson and Stewart Dalby

The competition to build Britain's first national sports stadium turned into a two-horse race between Wembley in London and a new site in Manchester yesterday after the Sports Council rejected bids from Birmingham, Bradford and Sheffield.

The council, which had been due to unveil the winner after eight months' deliberation, said it had been unable to make a final decision because it was concerned about who would end up owning the national stadium under the plan proposed for Wembley. The council, which expects to take another three to six months to choose a winner, also had reservations about the quality of the transport infrastructure in Manchester.

More than £100m ($157m) of funds from the national lottery are available to build the new stadium – which must be large enough to host big national and international sports events such as the FA Cup final, the Rugby League Cup final and Olympic athletics – but lottery rules forbid money being granted to profit-making organisations.

Yet Wembley plc, a publicly quoted company, has proposed replacing the famous north London stadium it owns and operates with a completely new national stadium on the same site.

Although Wembley'a plan involves traneferring ownership of the new stadium to a non-profit making body called the English National Stadium Trust, the council appears worried that lottery funds may end up benefiting the company, which has been plagued by financial problems in recent years.

Mr Rodney Walker, Sports Council chairman, said: "We have a lot of public to spend through the national lottery and we have to make sure that this money is not going to find its way back, through complicated mechanisms, to inappropriate sources."

Yesterday the company said it would seek to reassure the council that under its plan the new stadium would be owned by the nation, and not by the company or its shareholders. "We will talk to them to establish where their concerns lie," said Mr Nigel Potter, Wembley's finance director.

The council's reluctance to award the national stadium to Wembley may also reflect concern about the company's financial position. It was saved from receivership in May when its lenders and shareholders agreed a £140m rescue package and restructuring.

Wembley plans to spend £168m on the new stadium – £108m will come from lottery funds and the remainder from other public and private sources. The backers of the Manchester scheme remained confident it would triumph once doubts about public transport and parking were addressed.

Manchester is also bidding to host the Commonwealth Games in 2002. A decision is expected later this month.

Editorial comment, Page 15

PM rejects charges over UN safe havens in Bosnia

By Kevin Brown, Chief Political Correspondent

The government yesterday denied misleading the House of Commons about its part in a United Nations decision to withdraw troops from a Bosnian safe haven where 8,000 people are believed to have been massacred.

In an angry Commons confrontation Mr John Major dismissed suggestions by Mr Paddy Ashdown, Liberal Democrat leader, that the UK agreed to a UN withdrawal from Srebrenica a week before telling the Commons it was still considering the plan.

Almost drowned out by jeering opposition MPs, a visibly angry prime minister told Mr Ashdown: "What you are saying is not correct. You have been wrong throughout the whole of this episode."

Conservative MPs said there was no question of ministers misleading the Commons, which is regarded as a serious parliamentary offence inevitably leading to resignation, except in cases of national security or economic crisis.

Mr Major told Mr Ashdown: "I think you just occasionally might do British forces and the British government the credit of acknowledging what they have done."

But Mr Ashdown appeared determined to press demands for an explanation. Liberal Democrat strategists believe the government is vulnerable to allegations that it misled MPs and failed to protect Srebrenica from Bosnian Serb forces. "When Major goes into these paroxysms of rage in the Commons, it is usually because there is something suspicious under the surface," said a senior party official. "Eventually 8,000 graves are going to be found in Srebrenica, and people are going to want to know why it happened."

In a letter to Mr Major, released last night, Mr Ashdown said that Lieutenant-General Bernard Janvier, commander of UN forces in Bosnia and Croatia, had confirmed that the decision to pull out of Srebrenica was taken on May 24, with the support of the UK, France and the US.

A week later, on May 31, Mr Major told the Commons that a withdrawal from UN safe areas in Bosnia would probably prompt an immediate attack by Bosnian Serb forces. "Bloodshed and loss of life could be massive," he told MPs.

In the same debate Mr Malcolm Rifkind, then defence secretary, told Mr Ashdown that the government had "reached no judgment or conclusion" on whether the UN should change its policy of maintaining safe havens. In a letter to Mr Ashdown on June 5 the prime minister said that policy on the safe areas was a matter for the UN security council in the context of a wider decision on the role of UN troops in Bosnia.

Srebrenica fell to Bosnian Serb forces on July 11, without intervention by UN troops. About 8,000 men and boys were removed from the town. The Bosnian government says they were killed and buried in hidden graves.

PC surge 'driven by second purchases'

By Paul Taylor

The surge in home personal computer sales in the UK is being driven by replacement and second purchases rather than additional market penetration, according to a pan-European report into multimedia in the home published today.

The report, prepared by Inteco, an international market research firm, suggests that just 23 per cent of 1995 shipments in Britain are going into homes where the householder has no PC at work.

Mostly, says Miles Thistlethwaite of Inteco, PC sales in the UK are going to existing users, either as replacement or additional machines.

However, the report, based on a survey of 16,300 households across Britain, France, Germany, Italy and Spain, confirms a continuing surge in interest in CD-Rom technology. Roughly one in three PC owners have a CD-Rom drive: Germany leads the field with 46 per cent and Spain brings up the rear with 20 per cent. One in four home PC owners in Britain has a CD-Rom drive.

CD-Rom drive owners have an average of 13 titles and in all three main markets, Germany, France and the UK, CD-Rom use accounts for half time spent on a PC, nine out of 18 hours a week.

The survey also confirms the low penetration of modems – devices that allow PCs to communicate over telephone lines – and little interest generally in on-line services. German PC owners have the most modems – 32 per cent – while in the UK just 14 per cent of home PC users own a modem.

Inteco's research shows the majority of multimedia PC owners are wealthy males and that they spend more time with their PCs than other home PC users.

The study also suggests the prospects for the convergence of PC and television technology are overstated, saying "there are major problems that will inhibit the growth in PC usage."

Political standards row moves to House of Lords

By John Kampfner, Westminster Correspondent

Senior Labour party officials were meeting last night to agree tactics aimed at persuading Tories to vote with them for changes forcing MPs to declare earnings from outside interests.

The meeting took place ahead of an expected final session of the select committee on standards in public life, in which the Conservative majority has stopped short of the proposals of the Nolan committee. The issue will be put to the vote next Monday in what is likely to be an acrimonious debate.

Both sides have broadly agreed to ban MPs from tabling questions or speaking in debates on behalf of commercial clients' interests.

But Labour will table amendments seeking to tighten the rules. Letters are being sent by Labour to Tory MPs defending marginal seats, urging them to demonstrate their commitment to cleaning up public life by supporting the amendments.

Among the Nolan recommendations already accepted was the establishment of a parliamentary commissioner for standards – an outsider to monitor the conduct of MPs.

The first incumbent, announced yesterday with all-party approval, will be Sir Gordon Downey, former comptroller and auditor general.

The "sleaze" issue also reaches the floor of the Lords today, with the first concerted attempt to impose rules on peers taking money from outside interests to influence legislation.

Peers will discuss the broad proposals of its committee on procedure, which includes establishment of a register of interests. The debate will coincide with broadcast of a television documentary alleging systematic abuses by a number of peers.

A senior public relations consultant tells a Dispatches documentary on Channel 4 TV the usual price a peer is paid to speak from the floor, table amendments and be "as active as possible" on behalf of a client is upwards of £5,000.

The programme lists a series of conflicts of interest, including a peer who is alleged to have received almost £17,000 as chairman of a lobby organisation while advocating the causes of his clients during debates in the upper legislative chamber.

Delayed take-off for City airport

Michael Skapinker on London's newly-sold commuter airport

Mr Dermot Desmond, the new owner of London City Airport, was not saying how he planned to achieve the success that has eluded previous owner John Mowlem, the construction company.

Mr Desmond never gives interviews, his Irish spokeswoman said apologetically. She did not know where he was at the weekend when London City announced that he had bought the airport, in the capital's old Docklands, for £23.5m ($36.8m). She did not even know how old he was. "Very early forties," she thought.

While elusive, Mr Desmond is no recluse. He appears frequently in the Irish social and financial pages. He sold NCB, the Irish stockbroker he founded in the early 1980s, to Ulster Bank last year for I£25.5m. He received more than I£14m for his own stake.

A keen golfer, he is on the board of the Glasgow Celtic football club, of which he owns a substantial share. As a former chairman of Aer Rianta, the Irish airports authority, he is no stranger to airlines. Earlier this year he paid $15m for a 50 per cent stake in Pembroke Capital, an aviation finance company.

London City Airport has been an enduring disappointment and drain on the financial resources of Mowlem, which lost £70m on it over the past decade, including construction costs. Mowlem spent at least two years looking for a buyer for the airport. BAA, the privatised airports group which owns three other London airports – Heathrow, Gatwick and Stansted – refused to buy it.

The airport has, however, been winning passengers. It had 480,000 passengers last year, a 95.6 per cent increase from 1993. In the first nine months of this year nearly 407,000 people used the airport, a rise of 20 per cent from the same period last year. Mr William Charnock, the airport's managing director, says the airport will make an operating profit when it has 550,000 passengers a year. He expects it to exceed this number comfortably by the end of next year.

Like much else in London's Docklands, in the years after it opened in 1987 the airport suffered from a perception that it was too far from the city centre, difficult to get to, and surrounded by a grim urban wasteland. The last perception was always false. The airport, a short drive from the freshly-built Canary Wharf complex, is airy and comfortable, and with the advantage that passengers have to check in only 10 minutes before departure.

The notion that it was inaccessible was easier to justify. It is possible to travel to Canary Wharf on the Docklands Light Railway, from where a shuttle bus takes passengers to the airport. But it was the opening of the Limehouse Link road in 1993 that made access from the centre of London possible.

Mr Charnock says: "When the Limehouse Link opened, it gave reality to our statement that you could get here from the Bank of England in 15 minutes." About 70 per cent of passengers travel to the airport by road and there is also a shuttle rail service.

The airport will not benefit substantially from the extension to the London's Underground's Jubilee Line, which will not connect directly with it. Shuttle buses will still have to run from Canary Wharf.

Mr Charnock says he would like to see a fast river boat service on the Thames at peak times. Previous services have been too slow, he adds.

The airport added 169m to its runway in 1992, allowing it to take a bigger range of aircraft, including the British Aerospace 146 jet.

There are still only eight airlines operating from the airport, however. They include three national flag carriers, Lufthansa of Germany, Air France, and Sabena of Belgium. Air France yesterday started using a Fokker 70 jet on its services to Charles de Gaulle airport in Paris, replacing the turboprop previously used on the route. Crossair of Switzerland, a leading regional airline, also operates from London City.

The airport serves nearly all Europe's leading business cities - including Frankfurt, Paris, Brussels, Geneva and Zurich. It has been unable, however, to persuade British Airways to operate from there. Mr Charnock has approached Sir Colin Marshall, BA's chairman, several times on the issue, but without effect.

Mr Charnock says the airport does not appear to have been hurt by the start of the Eurostar Channel Tunnel train service. He says it will benefit from the opening of new facilities, including a planned conference centre near the airport. He hopes to persuade Mr Desmond to use some of the land near the airport to build a hotel.

London City's officials were cheerful about its prospects even when many in the airline industry could see no cause for optimism.

The difference now says Mr Charnock is that "we have an owner who's dedicated to the airport".

Opposition seeks tax boost for investment

By Robert Peston, Political Editor

Britain's opposition Labour party will today propose a doubling in tax allowances for new investment in plant and machinery as a short term boost to investment.

Mr Gordon Brown, the shadow chancellor, will also make the party's strongest commitment to cutting income taxes, in launching his recommendations for the November 28 Budget at a breakfast for chief executives of the UK's biggest companies.

"This budget is not about a choice between investment and tax cuts" he will say, "but about increasing investment as the only route to both sustainable tax cuts and decent public services".

His proposal is that any investment in plant and machinery above what companies are acquiring anyway should for a period of one year receive 50 per cent tax relief, compared with 25 per cent at the moment. He believes that the cost of such relief would be "significantly less" than £500m ($785m).

His concern is that investment is far lower at the moment than at comparable stages in previous economic recoveries. The Bank of England has warned that low investment has increased the risks of economic growth being held back by capacity constraints.

The UK's relatively poor investment performance, coming 21st in the Organisation for Economic Co-operation and Development's international league table of per capita investment, will be a cornerstone of Labour's general election campaign.

The party's campaigning will move up a gear today when it takes a full page advertisement in a national newspaper, saying that the UK is 18th in the OECD league table of national income per head, compared with 18th in 1979. Under the slogan, "If you'd slumped to 18th, wouldn't you change the management", it will say that Labour "wants an investment budget for Britain".

Other elements in Mr Brown's budget proposals are incentives for long term personal savings and a change in the rules on the government's private finance initiative, to attract more private sector capital into government projects.

Details will also be given of how a Labour government would establish "individual learning accounts", so that employees can build up credits to pay for training.

Mr Brown will claim that his proposal on allowances for investment are likely to be more effective than a reduction and eventual abolition of capital gains tax, which the government is considering.

To receive its tax break, companies would need to invest more than average *annual investment in* the previous two years and only the incremental investment would attract the higher rate relief.

A close colleague of Mr Brown said that if the government did not, a Labour government would introduce the allowance, if there was no recovery in investment in the meantime.

Exchange may set up share 'middleman'

By Norma Cohen, Investments Correspondent

The London Stock Exchange is considering the creation of its own inter-dealer broker – a middleman for share deals between market professionals – in direct competition with commercial companies which are its own members.

The move would help to make up for revenues that will be lost when the exchange closes its Talisman share settlement system next year. The plan is one of several commercial ventures the exchange is considering which would exploit the capabilities of its new Sequence VI trading system which will be completed *next summer*.

However, such a system is viewed as likely to force the existing four leading inter-*dealer brokers (IDBs) to slash* prices in line with the exchange, possibly driving them out of the business.

At *present, four* IDBs – Tullett & Tokyo, Garban, Cantor Fitzgerald and First Equity – operate screen-based systems allowing market makers to trade parcels of shares anonymously between themselves.

Market makers – firms *which commit their own* capital to buy and sell shares through all market conditions – fear that allowing their competitors to know they had a block of stock to trade would encourage them to move prices against them.

Officials at all four IDBs declined to comment yesterday, although all said they were aware of the stock exchange'a proposals.

The exchange's initial soundings have been well received by some member firms who believe commissions they currently pay to IDBs are too high. "We would like the service if it could be provided to us at cost," said the head of market making at one firm.

Commissions to IDBs were cut in half several years ago in response to complaints from top officials at some firms who *believed that inappropriate* inducements were being offered to staff to use particular brokers when there were *few differences* in *the* quality of service each provided. The brokers charge identical fees.

Currently, commissions are *0.05p for each share valued at* £5 or less, rising to 0.25p for each share traded at over £5 per share. Thus, a block of 100,000 *shares* at £2 each would cost £100 to execute via an inter-dealer broker.

Some market makers said *they would prefer not to* see the exchange provide services already offered by commercial organisations.

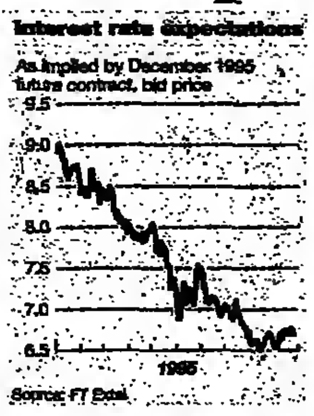
The short sterling market has advice for the chancellor and Governor

Interest rate policy scrutinised

By Graham Bowley, Economics Staff

Interest rate expectations

As implied by December 1995 futures contract, bid price



Source: FT Extel

As the chancellor and the governor of the Bank of England sit down to ponder interest rate policy at their monthly monetary meeting today, a £40bn-a-day industry – just a short walk away in the City – will be pronouncing its own judgment on where rates are going next.

The betting in the so-called "short sterling" futures market is that policymakers will leave rates unchanged until well into next year. Banks and companies use this market to protect themselves against adverse changes in rates, while speculators use it to gamble on how rates might move.

Short sterling futures are traded *on the London International* Financial Futures and Options Exchange. Their current price implies a prediction *that base rates will still* be *at* 6¾ per cent by the end of this year, rising to 7 per cent by the end of next year. With more *than £10,000bn each year* backing these bets, this is a forecast that policymakers ignore at their peril.

"*Short sterling takes in all* the latest economic and political news to give an indication of where the money market *thinks* short *term* interest rates will be going in the future," said Mr Nigel Richardson, an economist at Yamaichi *International, a Japanese bank.*

The companies and banks buying short sterling futures are making a simple bet. The price of the short sterling contract is equal to 100 minus whatever interest rate is expected when the three month contract expires, so the price of *the contract rises* when interest rates fall.

If a company thought interest rates would be 6¾ per cent *by December* it would *expect* the price of the December contract to be 93.25. If the current price of the December contract *was* below 93.25 – *in other* words the market expected interest rates to be higher than 6¾ per cent at the end of the *year – then the company could* buy the contract and expect to profit when the it expired in December. This allows a short *sterling trader to protect itself* against a possible interest rate movement, effectively fixing the interest rate at which it *borrows* or lends. A *more* aggressive investor can use short sterling to gamble on an interest rate change.

Britain has recorded its first balance of payments surplus with the newly industrialising "Asian tiger" countries for at least seven years, according to official figures released yesterday, *Robert Chote writes.*

The UK's current account surplus with Singapore, Taiwan, Hong Kong and South Korea totalled nearly £1.6bn ($2.51bn) last year, according to the Central Statistical Office. This follows deficits in each of the six preceding years since 1988 for which figures have been calculated.

The turnround from the £387m deficit in 1993 reflects a £640m reduction in the UK's visible trade deficit with these countries and a near doubling in the surplus on trade in "invisibles", such as trade in services and flows in investment income.

Last year also saw the UK double its current account surplus with the US to nearly £6bn. Almost all the improvement came from invisibles, with inflows of investment income rising by more *than* £2bn to £15.6bn.

Economists in the City use the forecast provided by the short sterling market as a basis for their own projections. "It is very useful. It tells you what the market *is predicting* and you then take the market into account when making your own forecast," said Mr Stuart Thomson, *economist at* Nikko, a Japanese bank.

Perhaps not surprisingly, the current average predictions of *City and other independent* forecasters vary little from that provided by short sterling. Comparisons of independent *forecasts by both Consensus* Economics, an economic consultancy, and the Treasury suggest that economists too, expect the chancellor to leave rates unchanged for the time being. They both predict rates will be about 6.7 per cent by the end of *this year and* 6.8 *per* cent by the end of next year.

But there have been times when the forecasts have been very different – and short sterling *has not always been right.* This year the short sterling market was expecting interest rates to be close to 9 per cent *by December. Economists* were expecting a more modest increase, and in the event they were proved more accurate.

Similarly, after the pound's exit from the European exchange rate mechanism in 1992, short sterling predicted *that interest rates would have* to remain high. In event they were cut aggressively.

"If you just want an average of *the views of everybody* acting in the market, then short sterling is fine," said Mr Ian Shepherdson, an economist at HSBC Markets. "But if you want an opinion, you need an economist. Short sterling gives the consensus, but the consensus is not always right."

Policymakers can draw solace from the fact that markets are wrong sometimes too.

UK NEWS DIGEST

Rightwingers strike deal on family law

The government is to press ahead with the troubled family violence bill following a last minute deal between Lord Mackay, the Lord Chancellor, and a group of rightwing Tory backbenchers on tenancy rights for cohabiting couples.

Lord Mackay, who postponed debate on the bill last week after protests from pro-family MPs, will table a series of amendments tomorrow in the hope of rushing it through before the end of the *parliamentary session next* Wednesday.

The amendments, drawn up after meetings with leaders of the rightwing revolt, will refocus the bill on dealing with domestic violence, and make it clear that cohabiting women *do not* have the same property rights as married women.

Conservative MPs said the amendments would probably ensure that the bill would pass its remaining Commons stages on Monday with few problems. Ministers hope it will complete its final stages in the Lords on Tuesday. *Kevin Brown*

Reuters staff ballot over pay

Journalists at Reuters, the news and information group, yesterday held a preliminary ballot on taking industrial action after the company made a 2 per cent pay offer to staff.

Unions at the group said that after accepting pay rises linked to inflation for five years they were seeking an increase that reflected what they see as increasing workloads. They asked for an across-the-board increase of 7 per cent for about 1,200 staff in the UK and Ireland. The management has offered 2 per cent with 2 per cent in merit money. Staff are angry that they have been offered 2 per cent when, they say, management bonuses have been about 22 per cent. *Raymond Snoddy*

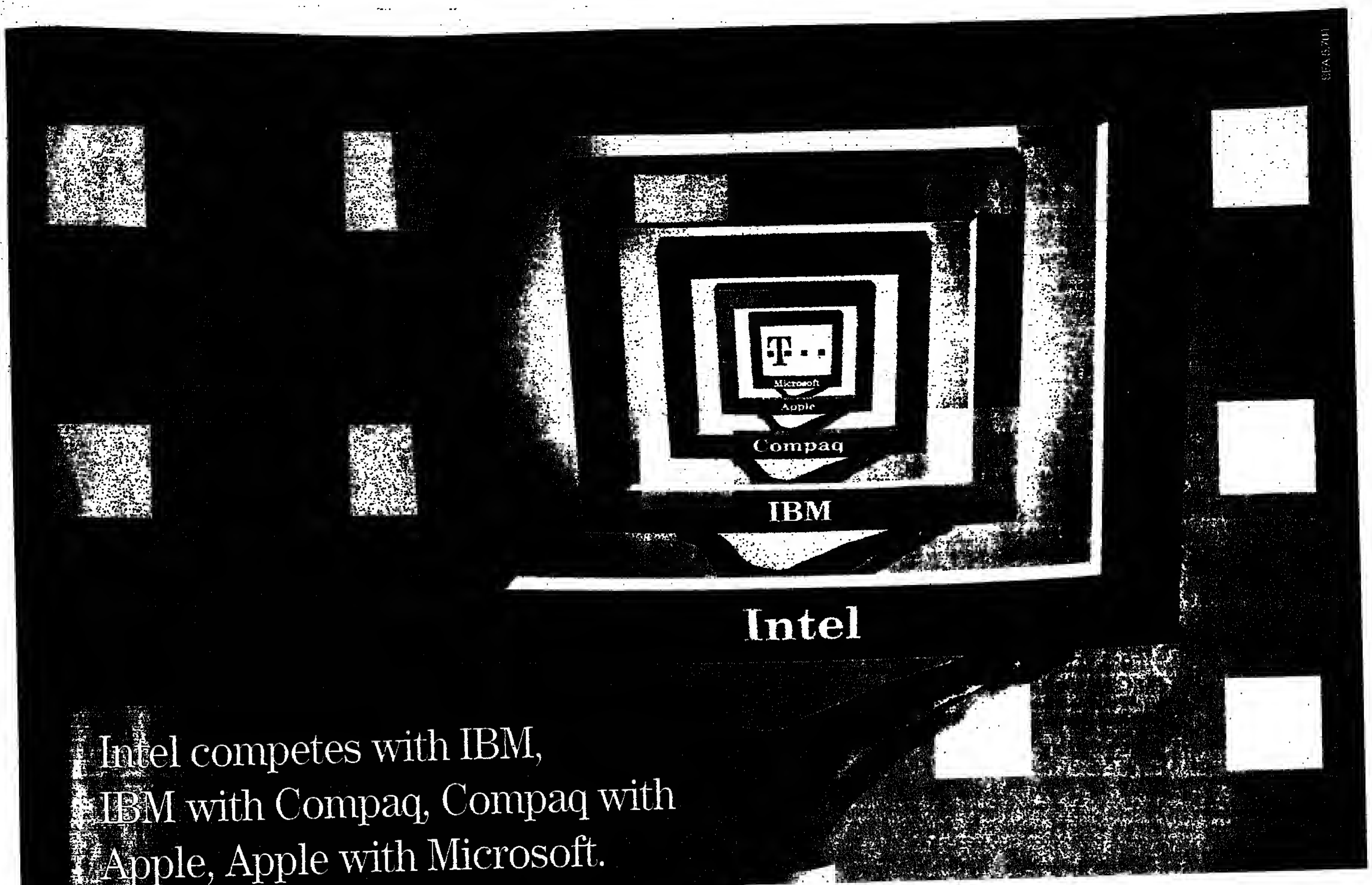
UK benefits 'less generous'

The level of unemployment benefit paid out in the UK is much less generous than most other European Union countries, according to statistics compiled by the Trades Union Congress *and published today*. An average unemployed person in the UK could expect to receive an amount that in reality amounts to only 14 per cent of average pay. This contrasts with the benefit rates elsewhsre which are earnings-related. This *ensures* jobless in Denmark receive as much as 99 per cent of previous earnings, while at least 53 per cent of previous earnings for German unemployed, at least 40 per cent of earnings for French jobless and 30 per cent in Italy.

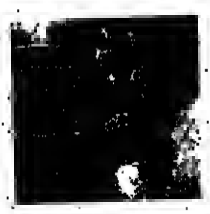
After UK's *decision* in 1980 to abolish a supplement to unemployment benefit, jobless get a flat-rate benefit unrelated to previous earnings. *Robert Taylor*

Benefit entitlement

هكذا من الأصل



Intel competes with IBM, IBM with Compaq, Compaq with Apple, Apple with Microsoft. But they all cooperate with Deutsche Telekom.



Deutsche Telekom is a driving force when it comes to shaping the multimedia information society. One of the reasons is that we have the most advanced information highways in the world. Which naturally makes us particularly attractive as a partner to other prime movers in the world of innovative ingenuity. This way, we can combine all our efforts in quickening the pace of progress even further.

Looking ahead, there's no doubt that information technology will play a crucial role in all areas of our life. To set the pace and point the way in tomorrow's markets, you have to be strong. But everyone needs a little help from their friends. Multimedia communication calls for a team of powerful partners, whose innovative strengths combine to achieve synergies guaranteeing the rapid translation of ideas into global reality.

What makes us the No. 1 choice as a partner.
Deutsche Telekom ranks No. 1 among telecommunications players in Europe and, as network operator, No. 2 worldwide. And Germany is the most dynamic telecommunications market within the European Union. But what's more important, Deutsche Telekom is streets ahead when it comes to multimedia and information highways. Germany boasts the highest number of ISDN connections and the most closely-knit fiber optics network in the world, running to some 100,000 km. We were also the first to use ATM, the transmission system for these fast lanes to the future.

Big names, great achievements to match.
With Intel, for example, we've set our sights on the multimedia superchip whose development will provide the solutions required of tomorrow's computers. Together with Microsoft, we're designing a software based on Windows architecture for multimedia services on the digital ISDN network. With Apple we're scouring the field of Newton technology for ways to walk hand in hand down the path of mobile telecommunications. Developed jointly with IBM, Telecash has moved electronic payments systems up a gear. We're currently working on a chip that will soon turn more than 50 million Eurocheque cards into a "one for all" card. And, as seal of quality for our own customer service, we're cooperating with Compaq in the field of computer maintenance services.

Deutsche Telekom – now a stock corporation.
The move to stock corporation opens up a world of opportunity, allowing us greater freedom to push ahead with technological innovation even faster and more effectively in the service of our customers. We're also currently in the process of forging one of the world's most dynamic global alliances with international partners.

You can share in our success.
Get to know our products and services tailored to meet your special needs and you'll get to feel the cutting-edge of tomorrow's technology. Today.

Our connections move the world.

Deutsche Telekom

BUSINESS AND THE ENVIRONMENT

Attention seekers in the financial market

Campaign groups are putting institutional investors under pressure to take action, says **Peter Knight**

Institutional investors are coming under increasing pressure from environmental groups to use their shareholdings as a lever for change.

Campaign skirmishes in the new financial battleground have already begun. For example, shareholders in RTZ, the UK-based international mining group, are the target of a letter-writing campaign organised by Friends of the Earth against the company's proposed mine in Madagascar.

Both Lloyds and Midland banks are under attack from a student-based organisation, called Lloyds & Midland Boycott Campaign, over third world debt. The group disrupted the AGMs of both banks earlier this year.

Some environmental and social-justice groups, co-ordinated by a new group called Global Witness, are forming a coalition to campaign against investors and companies involved in the proposed Bakun hydroelectric dam in Malaysia.

And Greenpeace is trying to encourage insurers and re-insurers to see their interests as different from those of the fossil fuel industry and its big customers – the so-called "carbon club". The club, especially the oil industry, lobbies against policies that would reduce the use of fossil fuels, such as a carbon tax. Greenpeace says these policies are needed to reduce the threat of global warming – a potential danger to the profits of companies involved in catastrophe insurance.

Much of the financial campaigning in the UK is loosely modelled on shareholder actions in the US where there are well-organised attempts to get corporations to take on more social responsibility.

"In the US the campaigns are very broad and include issues such as health, housing, the environment and the employment of blacks and women. Such actions are much more difficult in the UK because company law is more restrictive," says Crispin White, co-ordinator of the Ecumenical Committee for Corporate Responsibility in the UK.

Nonetheless, UK campaigners are starting to focus on institutional investors. They want the institutions to put pressure on managements of the companies to which they invest to improve environmental performance by using the threat of disinvestment.

Campaigners face two main hurdles – the public's ignorance of how financial markets work and the difficulty of forming pure business arguments.

One of the biggest assets of organisations such as Greenpeace is their popular support but the groups have yet to find a way to use it as a lever on the financial community. "When the public realise that they own British industry through their pension, then they are likely to use their power to persuade institutions to use their shareholding to create change," says Mark Campanale, investment analyst at the National Provident Institution's Global Care Unit Trust.

'When the public realise that they own British industry through their pension, then they are likely to use their power to persuade institutions to use their shareholding to create change'

But such popular environmental capitalism is a long way off. Campaigns, such as those against RTZ, Lloyds and Midland, rely on the threat to corporate reputation.

"We are playing the companies at their own game by making them defend their reputations. It's a powerful tool," says Sarah Tyack, forests campaigner at FoE.

No matter how important it is to protect public image, financial institutions have a defence against calls for disinvestment or selective investment: fiduciary duty, which is a legal obligation on those who invest other people's money to get the best possible return. It is based on a 19th-century legal definition of prudence, which excludes current concerns about the environment.

"Those are the rules of the game. One cannot expect fund managers to be swayed by arguments that they view as moral and therefore out of play," says Stephan Schmidheiny, the Swiss industrialist who organised the business response at the Rio Earth Summit.

Campaigners acknowledge that they have to avoid morality if they are to attract attention in the markets. Two years ago a coalition of groups sent briefing documents to 275 fund managers in the UK advising against buying shares in the flotation of Barito Pacific, one of the world's biggest makers of plywood. Last year, Greenpeace issued a similar document during the flotation in Amsterdam of EVC, a Belgian-based PVC maker.

PVC consumes about a third of Europe's chlorine production. The chemical is implicated in global pollution and Greenpeace wants it banned. The group argued that the future of chlorine was in doubt and therefore so was the long-term viability of EVC.

"The Greenpeace action had no effect on the EVC flotation whatsoever, other than being an irritant," said Nigel Taylor, EVC's financial director.

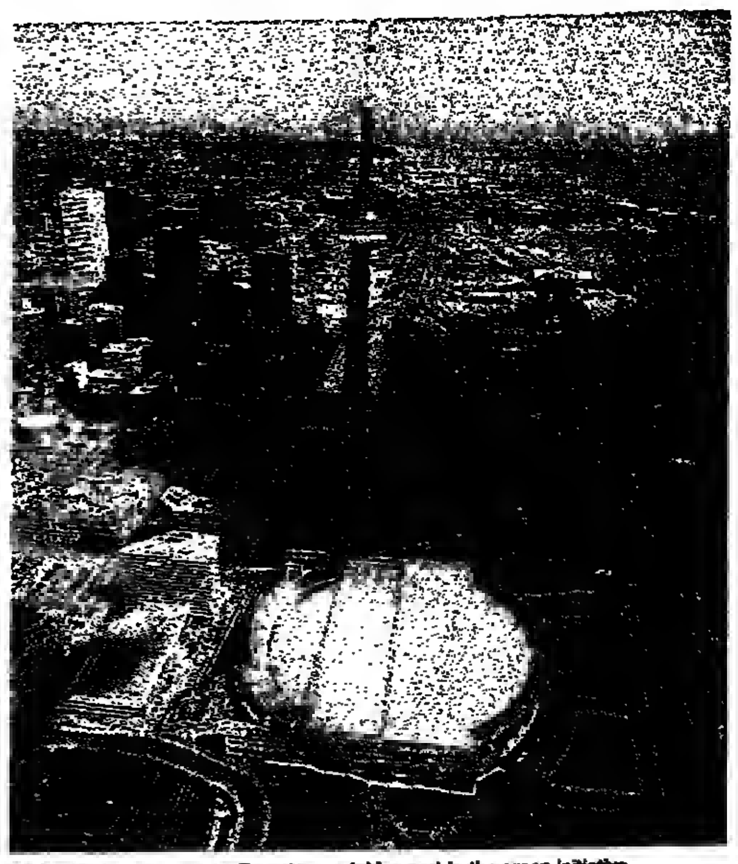
Campaign groups are inexperienced in talking to investors and do not have intimate knowledge of the businesses they criticise. But more important, their arguments generally have no price attached and are based on the long-term ecological grounds.

An environmentally unsound logging company, for example, might run out of trees in 35 years, but in the interim it will provide healthy returns to investors.

"Environmental groups have great potential to sway investment decisions, but they will first have to educate their supporters on how the world's financial community works. Only then will they be in a position to harness the power of their public support," says Schmidheiny.

The green household

Caspar Henderson on the growing popularity of a community-based environmental initiative in Ontario



So far 19 sites, many near Toronto, are taking part in the green initiative

Canada has long seen the promotion of green industries as central to its economic and social well-being. Environmental technologies and incentives have helped to foster a strong environmental sector.

In Ontario, Canada's most prosperous province, companies in soil remediation, hazardous waste treatment and recycling technologies are among world leaders. Environmental goods and services generate around $10bn (£4.6bn) a year, more than 3 per cent of the province's gross domestic product, with growth predicted, until recently, at 8 per cent year on year for the next five years.

Ontario's Progressive Conservative administration, elected earlier this year, is expected to try to unravel some of the province's stringent environmental regulation. But it has so far left intact a series of community-based projects under the province's Green Communities Initiative.

Home Green Up, which is part of the initiative, is growing. The idea is to increase efficient use of water and energy, as well as reducing other types of waste. The scheme also seeks to integrate domestic improvement with a strategy for local community environmental and economic benefit.

The Ministry of Environment and Energy provides up to C$750,000 over three years for each Green Community Initiative (there are business as well as domestic projects) so long as the city or community that applies can match this in cash and kind. Each community is required to create an accountable and representative organisational structure, and must develop an environmental strategy, including priorities and targets for energy, water and waste. Under Home Green Up, trained advisers visit homes to advise on domestic energy use and waste. So far, 19 cities and communities, with populations of 50,000 or more, are taking part, renovating between 3 per cent and 15 per cent of housing stock annually. Six more plan to start soon.

"You could call it the world's first conservation utility," says Keith Collins, co-ordinator of the community economic development secretariat at the Ontario Ministry of Economic Development, Trade and Tourism, which created the Green Communities Initiative. "When it comes to the environment it's been easy to point the finger of blame at big corporations; but we've turned that finger around and pointed it back at ourselves.

"And by doing so we're creating jobs, saving on infrastructure costs, retaining dollars in local communities and stimulating new green industry in a highly cost-effective manner." The figures, he says, speak for themselves. The province pays the C$100-C$150 cost of each Home Green Up visit. The visit is free to the householder, but as a result more than half spend over C$1,000 on environmental improvements, and save C$1,000 or C$2,000 a year on bills. In Guelph, to the west of Toronto, where to date 3,000 of the community's 33,000 households have taken part, Guelph 2000, the initiative's co-ordinating group, estimates that the government has seen a 455 per cent return on its investment in Home Green Up through the tax revenue from expenditure and new jobs.

The programmes have cost the province about C$26m to date, and the Progressive Conservatives, zealous to cut government spending wherever possible, have left the programme intact for at least another year. To suggest why, Keith Collins points to the case of Barrie, a city north of Toronto that is taking part. Barrie has avoided C$70m spending on new waste water and sewage treatment facilities thanks to measures to reduce water use proposed by the city's Green Communities Initiative.

Dave McLeod, a member of the initiative in the 25,000-household town of Peterborough, north-east of Toronto, is confident the programmes will learn to stand on their own feet. But he stresses that government funding is vital while momentum is built over the first three years. "Unfortunately, some of the really fun stuff like ecology parks will suffer a little when government funding ceases."

But the initiatives will thrive as creators of innovative services for a range of customers, including the provincial government, in areas such as waste reduction. "Already we have top notch consultants coming to us because of our detailed knowledge of consumer expectations and how products actually perform in the home . . . This is very much the business approach to environmental action, acceptable to the community because it creates jobs," says McLeod.

Canada's co-operative tradition plays an important role too. Establishing voluntary "multi-stakeholder" participation in a local executive body or group for a Green Communities Initiative "is a real struggle". But says Evan Ferrari of Guelph 2000, "once the consensus is there it is enormously powerful", because groups "have the support of business leaders, unions, environmentalists, teachers and others across the whole community".

The wealth of information they assemble from surveys in local Home Green Ups puts these groups in an ideal position to identify the scale and scope of demand for goods and services that meet high environmental and efficiency standards. A group can show local suppliers and manufacturers proof of widespread demand for goods such as more efficient gas boilers, which are frequently dismissed as a minority interest by business and sold at premium prices. The group can then negotiate discounts on such goods for Home Green Up households.

A key tool in the success of the programmes so far has been the Greenpages, a government-sponsored guide for householders and businesses to appliances, fittings and other consumer goods judged for greenness, local component, cost-saving and quality. But information technology is about to play a role in the shape of a green "smart card" scheme for participating households. Embedded with a magnetic strip or barcode, the card will record transactions for "green" goods and services among households, businesses and others participating in the initiative.

Community initiative groups, incorporated as not-for-profit corporations, will administer the card scheme and, as the Home Green Ups continue, assemble a wealth of ever more detailed information on green consumer behaviour with which they hope to leverage change. A number of municipal authorities in Britain are looking at the Ontario experiment with interest. Collins has no doubts: "This is the next wave of the environmental movement."

هكذا من الأصل

ARTS

Television/Christopher Dunkley

Survival of the classics

Why should television cram *Henry IV* Parts 1 and 2 into a single drama lasting less than three hours when Shakespeare gave us two plays, each lasting at least that long? Then again, why not? There is nothing wrong in principle with plundering the work of dead artists, either to create new works or to update old ones. From Shakespeare himself to Coppola, from Chaucer to Lloyd Webber, they have all done it, from the most respected and the most commercially successful to the least. Yet there should surely be some point in the undertaking. Shakespeare was justified in pinching material from Hollinshed and Plutarch because he improved on it. *West Side Story* is a splendid musical in its own right even though the plot is lifted from *Romeo And Juliet*.

What did John Caird's conflated *Henry IV* on BBC2 give us? Excellent performances from David Calder as Falstaff, Jane Horrocks as Doll Tearsheet, Jonathan Firth as Hal, and others. A more logical chronology than in the two-play original. More emphasis on the father-son relationships. But so much was missing, and the good aspects of the production (producer Annie Castledine) served mainly to make you wish you could have seen both works in their entirety. And why not? Between 1978 and 1984 the BBC gave us the whole Shakespeare canon but, if it is to survive as a major broadcaster and a public service operation, surely the BBC should always be in production with one Shakespeare play or another – preferably in the form Shakespeare left it, unless there is a good reason for messing it about.

★

Having said which, it should be emphasised that no abridgement, adaptation or even total re-write is ever going to damage the original. Judging from the reactions of some of the Janeites to the BBC's wonderfully entertaining *Pride And Prejudice* you might have thought that every copy of the book had been taken off the shelf and burned. On Monday the Daily Telegraph marked the end of the serial with a full page of reactions, largely hostile, from people bred in the print culture and who depend on the print culture for their living. It was like going to a bunch of ostlers for opinions on the first Mercedes Benz.

★

The announcement of the winning of the Channel 5 franchise, by a group including Pearson, publishers of the FT, was greeted as usual these days by much comment about the bids (the winners will pay £22m a year for their licence) and about technology (they are going to have to re-tune our video recorders – millions of them). But what does it all mean for the viewer? Channel 5 Broadcasting say they are expecting to spend £110m a year on programmes, which is about one seventh what ITV spends.

That does not necessarily mean one seventh the quality, but you can hardly expect to match the standards of the other terrestrial stations if you spend only a fraction of the money. There will be even more strip scheduling (the same series, such as a five-days-a-week soap opera, or the same type of programme, in the same slot each day) than we already get from ITV. And yet again news will be provided by ITN. Launch date is January 1997 so it is too early to be sure, but it looks as though C5B will be aiming to take viewers from ITV, BBC1, satellite and cable rather than Channel 4 and BBC2.

★

This may be the moment, while we are in house, for a word about *Jancis Robinson's Wine Course* on BBC2. Even observing the convention that the FT television critic should be tougher than anyone on programmes made by other members of the staff, such as the FT's wine writer, it must be said that this is an excellent series. First there is a good strong background story to each episode. Two weeks ago it was the fact that Reisling means not only that syrupy muck sold in narrow brown bottles in supermarkets, but also high quality wines produced from astoundingly difficult ground. Last week it was the way that phylloxera has hit the Napa Valley – Californians are keener on label design than on getting their feet dirty, said La Robinson in extra brut mode. There is also lots of common sense: the idea of "room temperature" evolved when rooms were a lot cooler than they are today; screw tops or crown corks are as effective as real corks, but customers resist change. Moreover, unlike so many television presenters today, JR understands and enjoys language: not only does she know there is no "n" in "restaurateur", she can also use the word "bucolic" casually and accurately.

★

Given the pro-modernist unanimity on virtually all television arts programmes, the approach of *Hidden Hands* on Channel 4 is marvellously refreshing. The series is willing, indeed keen, to question the assumptions of modernism which are usually accepted with a faith blinder than that of the religious fanatic. However, in attempting to right the balance there is an unfortunate tendency to go overboard in the other direction.

The first programme began with a definition of "theosophy" which sounded perfectly reasonable – in favour of the brotherhood of man, study of comparative religion, and so on – and then set out to show that this "mumbo jumbo" was embraced by significant numbers of modernist painters. The trouble was that only Kandinsky and Mondrian seem to have been really keen. Picasso, we were told, smoked opium and played with tarot cards: gosh!

Programme 2 had a much more significant thesis: that the success of abstract expressionism depended greatly on covert promotion by the CIA. The idea, during the cold war, was to show the world that expression was free in the US, not censored as in the USSR. Producer Ella Bahaire stood this argument up pretty well, although no one can now prove whether abstract expressionism would have done just as well, or better, without the CIA's activities. You do not need conspiracy theories to show the absurdity and emptiness of so much of modernism, just free thinking programme producers.

★

If the rest of *21st Century Jet* is as revealing as Episode 1, this five-part series on Channel 4 (Saturdays, 8.00 pm) about the development of the Boeing 777 could prove to be one of television's best series about industry. Rivalry for office space, the poor engineer at the interdepartmental meeting who could not remember what "SDS" stood for, the solution to passenger embarrassment at "the big hit sound" when the lavatory seat falls – it is an irresistibly vivid illustration of the joys and difficulties of teamwork in big business.

Musical/Sarah Hemming

Prisoner Cell Block H

There were two audiences at the first night of *Prisoner Cell Block H – The Musical*: devotees of the Australian soap, who whooped with delight as soon as the curtain rose on the alarmingly wobbly prison set – and the rest, who initially sat in baffled bemusement.

For Prisoner Cell Block H – The Musical operates on a rather precarious principle: if trashy TV soap equals camp cult show, then trashy stage musical will equal camp cult hit. (For those who remain hazy about the original, it is the women's prison drama with flimsy sets, solid actresses and stodgy plots, whose solemn awfulness has made it required watching.) This is a dicey strategy, as there is a world of difference between unintentionally hilarious flat lines that acquire cult status and a self-conscious parody of flat lines that aims for the same effect.

But, amazingly, for much of the evening, it works. Pitched at the *Rocky Horror* niche (how long before audiences arrive kitted out in vast denim smocks and lemon yellow blouses, or prison warden grey), recognition is the show's main card, and Don Battye and Peter Pinne (concept, music and lyrics) play it for all its worth.

The improbable plot, rickety scenery and regular fights are all in place and the audience responds in kind, whistling the goodies and booing the baddies – principally butch, granite-featured warden Ferguson ("The Freak"), whose relationship with her charges roughly equals that of a bottle of Domestos with a sinkful of germs. She is played here with enjoyable relish by Maggie Kirkpatrick, wickedly parodying her own role in the original series, and the audience boos her with such eager abandon that you begin to wonder how long they have been bottling up these emotions at home. The atmosphere of David McVicar's production is that of a particularly camp and very silly pantomime.

This does not take you all the way, however: the show is not as funny as one might hope and it is also a pretty long joke. But whenever things are flagging, they are generally revived by the appearance of the splendid Lily Savage, the Liverpudlian drag diva, who becomes absurdly embroiled in the plot when she is banged up for stealing a fondue set and murdering her sister.

Miss Savage, in a platinum blonde wig that resembles a whole flock of extravagantly permed sheep, is a head taller and a deal more glamorous than the rest of prison inmates (fans will be pleased to know that even in regulation denim dungarees, she *never* lets herself go), and she brings a further camp twist to the whole affair. Her appearances are nicely judged, however. Since Savage can send an audience with just a twist of those vermilion lips, or a word in that flat Scouse voice, it could so easily have become the Lily Savage show; instead she pitches her performance perfectly and raises the absurdity level another notch.

There are a couple of endearingly awful performances elsewhere too. Liz Smith mugs it up as the longest inmate Minnie, two tinnies short of a barbie, and Terry Neason plays the tough talking Steff like a brick stove on legs, but still sings like a dream. Emma Kershaw too gives a wonderful rendition of her pastiche torch song. Elsewhere the music is ho-hum and the singing is drowned out by the onstage orchestra.

To set out to be intentionally awful is a dangerous move and the show does not quite carry it off. It is enjoyable, good-natured rubbish, but it is neither outrageous or ridiculous enough to stay the full course of the evening. Kitsch, entertaining kitsch, but not quite entertaining enough.

Judging by the response of the first night audience, however, it is surely in for a long stretch.

Continues at the Queens Theatre, London W1 (0171-494 5040).

Lily Savage: a perfectly pitched performance

Alastair Muir

London Fringe Theatre

Shades of 'The Servant'

One of the most appealing qualities of the little Bush Theatre in west London is that it can make you feel you are sealed within another world. So it is with Naomi Wallace's *One Flea Spare*. Angela Davies's clever, understated set creates just the corner of a room, allowing the rest of the black box theatre to fill in the remainder and so trapping you with the characters in the claustrophobic intensity of Wallace's play. In Dominic Dromgoole's vivid production you can almost smell the vinegar with which the characters wash down the walls.

Set in London during the Great Plague, Wallace's new play is an acute study of social tension. Godfearing, upright William Snelgrave and his buttoned-up wife, Darcy, are in quarantine in their fine house, but when a runaway sailor and a mysterious little girl manage to sneak into their stronghold, the stage is set for another month behind barred doors, and for class friction to produce sparks.

Wallace enters the same territory as Pinter in *The Servant* or Genet in *The Maids*, exploring the power of servants who know enough and have sufficient moral superiority to manipulate their employers.

Here Snelgrave automatically appropriates Bunce, the sailor, as his servant. But the more Snelgrave asserts that he is not a cruel man, the more we suspect the opposite, and it does not take long for the shrewd Bunce and the even shrewder runaway maid, Morse, to work out how to play him. Gradually, imperceptibly, the two servants worm their way into the cold heart of the marriage, and, while death and social confusion reign outside, a minor revolution occurs within the four walls.

Wallace works her plot like a ghost story, letting information seep out tantalisingly – why does Darcy Snelgrave never remove her gloves? What is her fascination with Bunce's scar? By the time these questions have been answered, others have crept into their place and so you are kept enthralled. This elliptical style has its frustrating side – in places you are not quite sure what she is driving at – but it makes for a compelling, richly textured piece.

Dromgoole's production makes the most of this, and of the gritty poetry and startling images of Wallace's style. Robert Langdon Lloyd is somewhat mannered as William Snelgrave, but Sheila Reid is excellent as the damaged Darcy – a beautifully observed portrait of dry-eyed disillusionment and pain – and Jason Watkins has a coiled power as the affable, but watchful Bunce. Twelve-year-old Carly Maker is most impressive as Morse, combing porcelain pallor with an unnerving worldly wisdom.

The haunting atmosphere of this play confirms Wallace to be a writer not quite on the crest of her wave, but possessed of a great ability to create unsettling stage worlds.

Sarah Hemming

'One Flea Spare' at the Bush Theatre, London W12 (0181-743 3388).

Jazz/Garry Booth

A rare treat for fusionists

British guitarist John McLaughlin and Austrian keyboard player Joe Zawinul are at the top of the short list of Europeans who have left an indelible print on jazz, just behind Django Reinhardt. Self starters both, they were later pupils at the Miles Davis finishing school of hard licks, subsequently and separately continuing the development of jazz-rock fusion – Zawinul with Weather Report and McLaughlin with the Mahavishnu Orchestra. On Sunday night, in a rare treat for fusionists, they shared the same London stage at the Royal Festival Hall.

McLaughlin dazzles in any mode from straight classical to free extemporisation. In front of the Free Spirits electric trio, his current vehicle, he applies the ringing semi-acoustic instrument and virtuosic technique to enlarging on simple blue themes. The format is tried and trusted in jazz – drums, organ and guitar. The personnel of the Free Spirits make it a supercharged and deluxe version. Dennis Chambers, the trio's motor, attacks his oversize drum kit with the conviction of Mike Tyson while Joey DeFrancesco smoothes out the ride with deliciously cheesey chords from a genuine Hammond.

Pacing the stage up front, McLaughlin pours out constantly elevating lines, notes coming in such rapid succession that at times they all but weld together. The group's exquisite time changes, from the slow to mid-tempo swing of Carla Bley's "Sing Me Softly the Blues" to the clacking bossa nova take on "Round Midnight" suspend belief.

Generous to a fault on Sunday, JM even treated oldies in the crowd to nostalgic Sixties style distortion, before handing over to Joe Zawinul.

In his time with such as Cannonball Adderley, Zawinul contributed to the canon of jazz standards, but in recent years – he is in his mid 60s – he has been increasingly taken with synthesised voices. With the new group he mixes startling electronic chants, bleeps and atmospherics with a groovy backbeat and the overall effect, loose and shuffling, is akin to fashionable trip-hop. Shambling grooves which begin with bird calls or middle eastern utterances build up to cantering African anthems; wistful accordion sounding conversations are exchanged for rattling latin work-outs.

All this boded well for the climax of the show and when the Free Spirits wandered on to join Zawinul's young band a joyful – if ragged – jam session ensued. The two fusion pioneers should do it again, preferably in the studio.

INTERNATIONAL ARTS GUIDE

■ AMSTERDAM

OPERA/BALLET
Het Muziektheater Tel:(020) 551 8922
● The Flying Dutchman: by Wagner. Conducted by Graeme Jenkins and directed by Richard Jones. Soloists include Harald Stamm, Karen Huffstodt, Mark Baker and Hebe Dijkstra; Nov 4,7

■ BALTIMORE

CONCERTS
Baltimore Museum Tel: (410) 396 6310
● American Art Posters from Turn of the Century: an insight into the American way of life through advertising posters; from Nov 1 to Dec 31
THEATRE
Center Stage Tel: (410) 685 3200
● Don Juan: by Moliere in a translation by Christopher Hampton and directed by Irene Lewis; 8pm; to Nov 5

■ BRUSSELS

CONCERTS
Beaux-Arts Tel: (02) 507 8200
● Belgian National Orchestra: Yuri Siminov conducts Rachmaninov, Medtner and Sibelius; 8pm; Nov 3
Conservatoire Royal de Musique Tel: (02) 675 5414
● Peter Donohoe: pianist plays Prokofiev's Sonata's six, seven and eight; 8pm; Nov 6

■ LONDON

CONCERTS
Royal Opera House Tel: (0171) 304 4000
● Manon: directed and choreographed by Kenneth Macmillan to the music of Massenet and conducted by Barry Wordsworth; 7.30pm; Nov 1, 2, 7, 8
● Swan Lake: choreographed by Marius Petipa and Lev Ivanov. Vikotor Fedotov/Anthony Twiner/Barry Wordsworth conducts Tchaikovsky; 7.30pm; Nov 3, 4 (7pm), 6
GALLERIES
Serpentine Tel: (0171) 402 0343
● Big City, Artists from Africa: sculptures, drawings, images and objects by contemporary artists from several African countries; to Nov 5
OPERA/BALLET
English National Opera Tel: (0171) 632 8300
● The Barber of Seville: by Rossini. Conducted by Jane Glover and directed by Henry B. Little from the original direction by Jonathan Miller. Soloists include Alan Opie, Jean Rigby/Fiona James, Charles Workman and Gordon Sandison; 7.30pm; Nov 2, 4
● The Fairy Queen: by Purcell. A new production conducted by Nicholas Kok and directed by David Pountney. Soloists include Yvonne Kenny, Janis Kelly, Mary Hegarty and Yvonne Barclay; 7.30pm; Nov 3
THEATRE
Donmar Warehouse Tel: (0171) 369 1732
● The Glass Menagerie: by Tennessee Williams, directed by Sam Mendes. Cast includes Zöe Wanamaker and Claire Skinner; 8pm; to Nov 5
National, Cottesloe Tel: (0171) 928 2252
● Cyrano: by Edmond Rostand, adapted by Ranjit Bolt and directed by Anuradha Kapur. Rostand's French romance relocates to 1930's India with a mixture of colour, live music and dance. Cast includes Naseeruddin Shah; 7.30pm; Nov 8
● Richard II: by William Shakespeare. Deborah Warner's new production featuring Fiona Shaw as the king; 7pm; Nov 1 (1pm)
● Skylight: by David Hare. Directed by Richard Eyre and starring Michael Gambon and Lia Williams; 7.30pm; Nov 2, 3, 4 (2.30pm), 6, 7 (2.30pm)
National, Lyttelton Tel: (0171) 928 2252
● La Grande Magia: by Edouardo de Filippo in a translation by Carlo Ardito. Richard Eyre directs Alan Howard and Bernard Cribbins in de Filippo's comedy; 7.30pm; Nov 1 (2.15pm), 2

■ LOS ANGELES

OPERA/BALLET
Dorothy Chandler Pavilion Tel: (213) 365 3500
● The Abduction from the Seraglio: by Mozart. Conducted by Julius Rudel and directed by Michael Hampe. Soloists include Jorma Silvasti, Elzbieta Szmytka and Doug Jones; 7pm; Nov 4, 7

■ MUNICH

OPERA/BALLET
Bayerische Staatsoper Tel:(089) 22 13 16
● Anna Bolena: by Donizetti. Conducted by Fabio Luisi and produced by Jonathan Miller. The cast includes Edita Gruberova, Vesselina Kasarova, Anna Salvan and Roberto Scandiuzzi; 7pm; Nov 2, 6

■ NEW YORK

CONCERTS
Carnegie Hall Tel: (212) 247 7800
● Argerich and Kremer: pianist Martha Argerich and violinist Gidon Kremer; 8pm; Nov 1
● Beaux Arts Trio: all-Beethoven programme; 8pm; Nov 2
● Orchestra of St. Luke's: with soprano Barbara Hendricks. Bernhard Klee conducts Schubert and Mozart; 8pm; Nov 4
GALLERIES
Guggenheim Soho Tel: (212) 423 3500
● Dieter Appelt: retrospective with more than 60 paintings and sculptures; to Nov 5
OPERA/BALLET
New York City Opera Tel: (212) 307 4100
● La Bohème: by Puccini. A new production conducted by Christopher Keene and directed by Graziella Sciutti; 8pm; Nov 2, 5 (1.30pm)
● Temple of the Golden Pavilion: by Mayuzumi. A new production directed by Jerome Sirlin and conducted by Christopher Keene. Based on a novel by Yukio Mishima in an English translation by Christopher Keene; 8pm; Nov 3, 8
● *The Magic Flute*: by *Mozart*. Conducted by Randall Craig Fleischer and produced by Lotfi Mansouri; 1.30pm; Nov 4
● Turandot: by Puccini. Conducted by Guido Ajmone-Marsan and produced by Jonathan Eaton; 8pm; Nov 1, 7 (6.30pm)

■ PARIS

CONCERTS
Champs Elysées Tel: (1) 49 52 50 50
● Festival Orchestra of Brescia and Bergamo: with pianist Zoltán Kocsis. Iván Fischer conducts Bartók's "Concerto for Piano and Orchestra No.2"; 8.30pm; Nov 7
● Festival Orchestra of Brescia and Bergamo: with pianist Zoltán Kocsis. Iván Fischer conducts Bartók's "Concerto for Piano and Orchestra No.3"; 8.30pm; Nov 8
● Festival Orchestra of Budapest: with pianist Zoltán Kocsis, mezzo-soprano Ildikó Komlósi and bass Kolos Kováts. Iván Fischer conducts Bartók's "Concerto for Piano and Orchestra No.1"; 8.30pm; Nov 6
● French National Orchestra: with violincellist Mstislav Rostropovitch. Georges Prêtre conducts Berlioz, Fauré, Saint-Saëns, Messaiaen, Honnegger and Schmitt; 8pm; Nov 4
● Orchestra du Gewandhaus of Leipzig: Kurt Masur conducts Strauss' "Metamorphoses" and Beethoven's "Symphony No.3"; 6.30pm; Nov 3
OPERA/BALLET
Opéra National de Paris, Bastille Tel: (1) 47 42 57 50
● Eugène Onégin: by Tchaikovsky. A new production produced by Willy Decker and conducted by Alexander Anissimov. Soloists include Gerlinde Lorenz, Solveig Kringelborn/Galina Gorchakova, Anthony Michaels-Moore; 7.30pm; Nov 4
● Les Variations d'Ulysee: a new production choreographed by Jean-Claude Gallotta to the music of Jean-Pierre Drouet; 7.30pm; Nov 6

■ VIENNA

OPERA/BALLET
Wiener Kammeroper Tel:(1) 512 0100
● The Turn of the Screw: by Britten. Conducted by Edgar Seipenbusch/Joan Grimalt. Soloists include Mark Duffin, Olga Schalaewa and Felix Purzner/Ingo Petersen; 7.30pm; Nov 1, 4, 6, 8

■ WASHINGTON

CONCERTS
Kennedy Center Tel: (202) 467 4600
● Bolshoi Symphony Orchestra: with pianist Boris Berezovski. Peter Feranech conducts Tchaikovsky and Sibelius; 3pm; Nov 5
● National Symphony Orchestra: with violinist Laurence Kayaleh. Leonard Slatkin conducts Mumford, Hartke, Bruch and Mahler; 8.30pm; Nov 2, 3, 4, 7 (7pm)
● National Symphony Orchestra: with soprano Kathleen Battle. Leonard Slatkin conducts Previn and other orchestral works; 8.30pm; Nov 8

WORLD SERVICE

BBC for Europe can be received in western Europe on Medium Wave 648 kHZ (463m)

EUROPEAN CABLE AND SATELLITE BUSINESS TV

(Central European Time)
MONDAY TO FRIDAY

NBC/Super Channel:

07.00
FT Business Morning

10.00
European Money Wheel
Nonstop live coverage until 14.00 of European business and the financial markets

17.30
Financial Times Business Tonight

Midnight
Financial Times Business Tonight

Ian Davidson

States of mind

There are more important topics for European leaders than nuclear policy

There was something engagingly dotty about this week's summit meeting between John Major and Jacques Chirac. The British and French leaders evidently got on very well together, and they were obviously pleased to announce an ostensibly large step towards a convergence of their nuclear weapons doctrines.

Now, it is delightful that Britain and France should find common ground on such a knotty topic. Yet it is not clear whether this doctrinal convergence contains any real intellectual substance or operational utility.

What is clear is that nuclear doctrine is not one of today's most pressing problems, and that there are many other issues which would have been much more deserving of the attention of two such busy European leaders.

In the past, nuclear weapons doctrine was a subject of permanent ideological disagreement between the UK and France. In fact, the real differences between the two countries were not in their nuclear doctrines but in their alliance doctrines: the British proclaimed their total commitment to Nato, the French their national independence.

British nuclear doctrine was governed by alliance strategy, and was essentially a contribution to the larger forces of Nato. But if Britain had wanted to use its nuclear forces independently of Nato, its options – and therefore its doctrine – would have been just as limited as those of the French.

Now, after three years of earnest meetings of officials, it appears that the two sides have recognised that there is much less that divides them than they used to think. But what is the point of this near-identity of views? It is not obvious.

Not only is there no longer a nuclear threat from a hostile superpower, there is no significant military threat of any kind from any quarter. So it is difficult to see how either Britain or France can be confident of the usefulness or usability of their nuclear weapons.

Nato is still searching for a new nuclear doctrine for the post-cold war world. Perhaps the other members of the alliance should be told if Britain and France really have agreed on the terms and conditions for using nuclear weapons, including the firing of a "warning shot" at the start of a confrontation.

The cynical observer will say that this Franco-British meeting was not really about making policy; it was about making friends, and in the process propping up the self-esteem of two second-rank nuclear powers.

President Chirac in particular needs friends now, since he has made himself something of an international pariah for his decision to resume nuclear testing. He has reason to be grateful to Mr Major for being one of the few world leaders who has given him some moral support.

Nato is still searching for a nuclear doctrine for the post-cold war world

Mr Major may have thought that a nuclear rapprochement with France would demonstrate the virtues of co-operation between sovereign national governments, and trump the competing claim of European integration. If so, it seems he was disabused: when he talked up the new Franco-British defence pacts in such terms, Mr Chirac pointedly argued they were part of the building of a more integrated Europe.

In logical as well as in rhetorical terms, Mr Chirac is obviously right. In today's world, the sensible alternative to Nato's cold war strategy is not a nostalgic reversion to the heroics of the nation-state, but the development of new forms of security co-operation with close neighbours and natural allies. Since the US is inevitably going to be less engaged in looking after Europe's security interests than during the cold war, Europe will have to do much more for itself.

This is how Lord Howe, the former foreign secretary, put it on Monday at a meeting of the Centre for European Policy Studies, a Brussels-based think-tank: "The mixture of American detachment and European vacillation, which for too long characterised the events of ex-Yugoslavia, has told us all what we should have realised immediately after the fall of the Berlin wall: Europe will be called on to define its own interests and act upon them much more than ever before, especially if there is to be peace in our backyard.

"That backyard, our own European sphere of influence, now stretches at least from the Atlantic to the Urals, from the Arctic to the Sahara, and probably some way beyond."

In principle, this conclusion was written into the 1991 Maastricht treaty, which established elaborate procedures for creating a common foreign and security policy for the new European Union.

The problem is that member states which had been most accustomed to having a national foreign policy, starting with Britain and France, were determined not to be subject to any kind of European constraint. They insisted on rules which would ensure that nothing would happen under the rubric "common foreign and security policy". Four years have passed, and indeed nothing has happened.

So one of the more urgent questions facing Britain and France today is: are they going to take a more constructive line on the question of a common foreign and security policy at next year's intergovernmental conference?

This will be one of the central demands of the German government at the conference. But it will be given added urgency by the EU's commitment to admit up to 10 new member states from eastern Europe, extending its reach to the borders of the former Soviet Union. So the Europeans had better start thinking about it now.

The 50th anniversary of France's social security system last month was little cause for celebration. "Our system is in crisis," admitted President Jacques Chirac. Referring to accumulated deficits of about FFr120bn (£15.6bn) for the past two years, he said: "We cannot delay the choices we face."

Those choices, now being finalised, represent the biggest challenge confronting the embattled administration of Mr Alain Juppé. The prime minister's plan to unveil a "bold and profound" reform this month and his pledge to eliminate the welfare deficit by 1997 will determine whether France can qualify for European monetary union. Failure to achieve his objectives, or mishandling of the country's sensitive social security institutions, could cost Mr Juppé his job.

According to a report published yesterday by the Commission des Comptes, the official auditor, the three main branches of the social security system – the healthcare, pension and family allowance schemes – are all in deficit.

The report forecasts that the total gap between social security receipts and expenditure will climb to FFr64.5bn this year, compared with FFr55bn in 1994. Added to an expected central budget deficit of FFr322bn, France's total public sector deficit will be more than 5 per cent of gross domestic product, well above the 3 per cent limit laid down to the Maastricht treaty.

The causes of the crisis are easily identified. Financed mainly by payroll levies, the welfare system has been starved of resources by the country's high unemployment. A vicious circle has emerged, in which payroll levies have been increased to fund the shortfall in receipts, further obstructing job creation. Yesterday's announcement that the jobless rate rose from 11.4 per cent to 11.5 per cent in September underlined the stubbornness of the problem.

Demographic trends have also reduced contributions to the system and increased the burdens it faces. In 1990 there were more than two members of the active population for each pensioner. The ratio has fallen to 1.75 and is expected to decline to 1.2 by 2015.

The ageing of the population has put pressure on the state retirement scheme, in which pensions are funded by the existing workforce. The result is a deficit of almost FFr15bn this year and a potential time bomb for future generations.

France will have to take bold action to control its unwieldy social security system, says **John Ridding**

Weighed down by burden of care

Increased life expectancy and associated medical costs have also driven up healthcare expenditure.

Such structural strains have been exacerbated by inefficiencies and some over-generous entitlements in the system. French people can visit as many doctors as they like, and doctors are generally free to prescribe heavily subsidised drugs. "The generic version of amoxycillin [a popular antibiotic] is more expensive in Germany than the original molecular drug is in France", says Dr Claude Reichman, a campaigner for healthcare reform, illustrating the distortions arising from subsidies and price controls.

Although France annually spends about 10 per cent of GDP on healthcare, the third highest proportion among industrialised countries, the results are mediocre. In terms of infant mortality, France ranks only 10th in the world.

The complex system of welfare management, in which administration is divided between trade unions and employers associations, has obstructed accountability. "The government ultimately sets the financial constraints, but no one considers profits or losses on the ground," says one health economist. He points to the hospitals, which account for almost half of health spending and which have an estimated surplus of 60,000 beds, as the most glaring example of mismanagement.

If the diagnosis is easy, cures have proved more elusive. Mr Chirac claims that "the 17 or 18" previous bids to reform the system have not tackled the core of the problem, merely raised the burden of payroll levies. Governments have shrunk from sensitive reforms such as hospital closures, while trade unions have defended their members' *acquis sociaux*, or acquired social rights. "It is a political minefield," confesses one centre-right MP.

Faced with such a daunting inheritance, Mr Juppé is preparing a broad-based assault.

France: a system in poor health

Social security system accounts

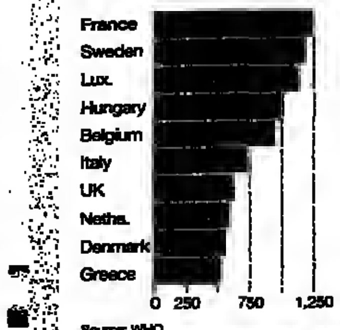
FFr bn	1994	FORECASTS 1995	1996*
Health insurance	–31.5	–36.6	–35.1
Work accidents	–0.1	+0.1	+0.9
Family allowances	–10.4	–13.2	–11.9
Pensions	–12.7	–14.7	–14.4
Balance	–54.7	–64.4	–60.5

Source: Commission des Comptes

*Excluding planned measures

Hospital beds

Per 100,000 people 1991



Source: WHO

Pharmaceutical consumption

$ per person (current prices) Purchasing power parity

	1993	1980
Germany	335	154
France	309	115
Canada	298	66
US	280	92
Italy	275	81
Belgium	267	102
Lux.	236	101
Iceland	206	93
Austria	191	84
UK	181	58

Source: OECD

Although the final plan will not be unveiled until the middle of the month, when it is due to be presented to the *National Assembly*, the *thrust* of the government's strategy and some proposals are emerging.

The underlying principle is to spread the burden as broadly as possible. On the funding side, proposals range from an increase in the rate and/or scope of the CSG, a tax on personal income set at present at 2.4 per cent, to higher fees from welfare recipients. Hospital patients are expected to see an increase in their bills, while pension contributions could be raised and, for civil servants, extended from 37.5 to 40 years. Taxes on medicines and family allowance payments are under consideration.

On spending, efforts are expected to focus on healthcare. Hospital spending, forecast to rise from FFr219bn in 1994 to FFr232bn this year, will be limited to a 2.1 per cent increase next year. Doctors will be issued with tougher guidelines concerning the medicines to be prescribed for various illnesses, while steps will be taken to curb "medical nomadism" – the practice of visiting several doctors to seek treatment for one ailment.

The boldest moves, however, may come in measures to service accumulated debts and, more importantly, to reform the basis of welfare financing. The combined deficits of 1994 and 1995 are expected to be consolidated in a single body, which may issue bonds and sell property assets belonging to the welfare system to repay its debts. For future funding, and to help ease structural barriers to employment, the burden may be shifted from payrolls to a broader tax base, such as the CSG.

Mr Juppé's problem is that resistance is already mounting. Emboldened by the government's falling popularity – Mr Juppé's approval rating has tumbled after a series of policy reversals and a housing scandal – trade unions are preparing protests. On Monday night, the country's main unions called for a national day of action on November 14 to protest against welfare reforms.

There is an element of sabre rattling to the unions' stance and divisions remain within their ranks. But confrontation may be hard to avoid. "I don't think that consensus can be obtained," says Mr Jean Gandois, president of the Patronat employers federation. "So the government must have courage in taking its decisions."

Mr Juppé's spine has been stiffened by the necessity of reform. "This is the last chance," says one government aide. He may also take heart from Mr Chirac's stance. In what many regard as a significant policy shift last week, the French president urged that absolute priority be given to tackling deficits. "I was not elected to be popular," he said, outlining the need for two years of austerity.

But hesitation over reforms at France Télécom and August's forced resignation of Mr Alain Madelin, the free-market finance minister who antagonised trade unions, do not provide encouraging precedents. Nor is government resolve the only condition for success. The austerity required to reform the welfare accounts may prove self-defeating.

The French economy is already slowing, and few economists believe that GDP will expand next year by the government's forecast of 2.8 per cent. Financial markets, although cheered by Mr Chirac's tough talk, want to see action. As a result, the franc remains fragile, and the Bank of France will not be rushed into reducing interest rates.

"It will be a very difficult operation to rescue the welfare system without halting the economy and prompting social unrest," says one member of the prime minister's Gaullist RPR party. Mr Juppé will require skill and determination if he is to avoid succumbing to its complications.

LETTERS TO THE EDITOR

Number One Southwark Bridge, London SE1 9HL

We are keen to encourage letters from readers around the world. Letters may be faxed to +44 171-873 5938 (please set fax to 'fine'). Translation may be available for letters written in the main international languages.

Shell should speak out to help the Ogoni

From Ms Anita Roddick.

The death sentences handed down to Ken Saro-Wiwa and other Ogoni leaders by a Nigerian military court this week raises serious questions for those doing business there.

Where do we draw the line? What do we as businesses owe to the communities we work in? Sometimes we have to make wholesale changes to how we can do business with vulnerable communities. The only way we can do so is by going, listening, then taking action.

It's very clear that Shell has not learned that lesson in Ogoniland. While billions of dollars of oil revenue have been ripped out of the heart of the Niger Delta, the Ogoni people have to live in a land without clean water, air or soil. Most Ogoni still have no electricity. And now, for peacefully demonstrating against environmental destruction and for basic human rights, the Ogoni are slaughtered and their leaders condemned to death with no right of appeal.

The first five verdicts were passed down on Monday. Ken Saro-Wiwa and three other senior Ogoni leaders were given the same sentence yesterday in the face of a storm of international protest.

The Commonwealth Human Rights Initiative, Article 19, Human Rights Watch, Amnesty International – all have reported on the depravity of the court proceedings. Saro-Wiwa himself has garnered awards for his non-violent protest, and was recently nominated for the 1996 Nobel Peace Prize.

And yet the verdicts come down. What power can stop this? Shell can stop it. Its operations (and those of other oil multi-nationals) sustain the Nigerian dictatorship.

Shell claims privately that it is appalled by what is going on, but says its hands are tied. It will be asked to leave if it intervenes on Saro-Wiwa's behalf. It has said it does not interfere in national politics and that due legal process must be respected in the case of the Ogoni leaders.

Due process? Michael Birnbaum QC went to view the tribunal and reported that "there were grave doubts as to the legality and fairness of the proposed trial". The trial by a military-appointed tribunal is flagrantly an abuse not only of international law, but of the Nigerian constitution itself.

So, will Shell join me and thousands of others in publicly condemning the trial for the sham it is? It is no good whispering advice to General Abacha and hoping he might listen. Only public statements will carry weight. Nothing will save these innocent men except our speaking out.

Anita Roddick,
The Body Shop,
Watersmead,
Littlehampton,
West Sussex BN17 6LS, UK

Excluding the young keeps things cosy

From Mr Keith Phair.

Sir, to the article headlined "Bosses urged to give young a say" (October 26) you report Professor Prahalad's perceptive criticism of managements which fail to give young employees any ability to influence corporate direction.

My 11 years' experience since leaving London Business School regrettably leads me wholly to endorse his opinion that the views of external consultants are usually preferred to those of internal sources. I can explain why this is so.

First, hierarchical management structures mean responsibility for strategy resides with managers who are too far removed from the detail to understand how their businesses work. This leads to conservatism and control failures (Barings, Kidders and so on).

Secondly, managers who don't understand the details of their businesses feel they are exposed to loss of face if they open up to subordinates. Finally, the prescriptive strategic formulae peddled by consultants enables managers to position their businesses close to industry averages. If they make the same mistakes as all their competitors, why should they be fired?

Weak managers don't like to be challenged, don't welcome change and mistrust solutions which could be seen as radical.

Most financial service businesses have cultural roots which are decades old. Most of these can only survive by making radical changes, but few are thinking radically enough.

Keith Phair,
Woodbridge Road,
Waldringfield,
Suffolk IP12 4PW,
UK

Give Turkey the attention it deserves

From Mr Michael R.N. Clarke.

Sir, I read with interest your excellent survey of Business Locations in Europe (October 24), which was very wide-ranging, including coverage of central and eastern European countries as far afield as Kazakhstan and Kyrgyzstan.

However, the only coverage of Turkey was restricted to its inclusion on the regional map at the back and a very brief reference to its fast-growing economy.

Turkey is a very attractive market for foreign investors. It has an established market economy, a liberal foreign exchange regime, a developed infrastructure and a secure investment environment.

The country has made ambitious privatisation efforts and has strong ties with the Commonwealth of Independent States and the European Union.

Many multinationals have already invested in Turkey, recognising the opportunities in a country whose economy has achieved an average growth rate of 5 per cent over the past five years and which has a population of more than 61m, half of which is aged under 30.

Total foreign investment to Turkey since 1980 has been more than $14bn (£8.8bn).

Forum Europe's April conference on "Trading with Turkey", and the seminar on "Investing in Turkish Privatisation" held in Brussels last month indicated a high level of business interest in Turkey.

At present about 3,000 foreign companies operate in the country, of which some 70 per cent are involved in manufacturing. Following customs union with the EU, scheduled for January 1996, this number is expected to increase significantly.

Turkey therefore surely merits better recognition as a business location in south-eastern Europe.

Michael R.N. Clarke,
Coopers & Lybrand,
Büyükdere Caddesi 111/2-5,
80300 Gayrettepe,
Istanbul, Turkey

Raising score for Wembley in stadium debate

From Mr Alan Coppin.

Sir, I was interested to read your article on the progress of Britain's National Stadium selection ("Take your seat for the final of the Great Stadium Battle", October 23). However the article contains a couple of inaccurate comments.

Far from suffering from "poor transport", Wembley's public transport system is among the best of any sports stadium in the world.

Nowhere can match the massive carrying capacity of the London Underground, at present able to handle 30,000 passengers per hour and soon, following a £32m investment in *Wembley Park station*, to be increased to 50,000 per hour.

It was also incorrect to suggest that the Sports Council might consider spending "hundreds of millions of pounds of public money bailing out a company with such a poor financial record". The Sports *Council Lottery Fund's* brief have been designed has prevent such an occurrence. No Sports Council funds will go to Wembley Plc – which completed a very successful refinancing to the summer and is now financially healthy.

Alan Coppin,
chief executive,
Wembley plc,
Wembley Stadium,
London HA9 0DW, UK

FINANCIAL TIMES
Number One Southwark Bridge, London SE1 9HL
Tel: +44 171-873 3000 Telex: 922186 Fax: +44 171-407 5700
Wednesday November 1 1995

Canada after the vote

The most depressing lesson from the Quebec referendum is also a familiar one: a plausible politician who offers something for nothing can win many votes. Mr Lucien Bouchard, speaking for the separatists, promised the people of Quebec all the advantages of sovereignty with none of the drawbacks. Many of Quebec's francophone voters clearly believed him.

A more optimistic lesson is that there are limits to the credibility of such fairy-tales. A narrow hut sufficient majority of the electorate rejected Mr Bouchard's offer. Even among the francophone population, his natural constituency, a substantial minority said no, presumahly because they concluded that the economic costs of separation would ontweigh the advantages.

So the lesson for the separatist Parti Québécois (PQ) is that, to have any hope of a clear majority in any future referendum, it must first change the structure of the province's economy. One reason why it is vulnerable to post-independence economic collapse is that euccessive Quebec governments, Liberal and PQ alike, have relied on heavy borrowing, a big state sector, and transfers from the rest of Canada. Only by breaking clearly with such policies could the PQ make a more credible case for independence – though in tha process it might also deprive the separatist cause of some of its emotional fuel.

The federalists face similarly difficult choices. Mr Jean Chrétien, the federal prime minister, has expressed his desire for reconciliation between Quebec and the rest of Canada. In the final few days of the campaign, indeed, he promised a fresh look at Canada's constitution. Yet he is caught in a dilemma just as agonising as that of the separatists.

Of the two things Quebec's francophone voters appear to want, one – a redrawing of the relationship between the federal government and the provinces – is shared with many English-speaking voters elsewhere in Canada. The other – parity with English-speaking Canada as one of the country's two distinct national societies – is likely to prove much harder to accomplish.

That position was enshrined in the British North America Act, Canada's original constitution, but was lost – so Quebec believes – when the constitution was "repatriated" in the early 1980s. The loose phrasing of the referendum question was intended to exploit the deep longing of many francophone voters for a return to the federation's origins.

Yet since the 1860s, when the North America Act was passed, Canada's "two solitudes" have splintered further. Significantly, Quebec's separatist leaders believe they could reach an accommodation with Ontario, the heartland of English-speaking Canada. Once, that would have been enough: when Ontario and Quebec agreed, the rest of Canada had little choice but to follow suit. But now power has slipped away from hoth provinces: abova all to western Canada, rich in natural resources, drawn ever-closer to the United States.

Free trade with the US under Nafta reinforces that trend, undermining the branch-plant economies of Ontario and Quebec. Politicians in the west believe their region has for years heen exploited by the central provinces. They have no desire to concede Quebec the privileged status its voters so passionately desire.

So Canada seems doomed to continue its long and painful argument with itself. But at least for now an irreparable breach has been avoided.

Way to Wembley

Football comes closest to being the UK's national sport, crossing classes and regions. The FA Cup Final at Wembley, the climax of the season, is its most popular sporting event, and Wembley's twin towers, rising above the furniture superstores of a grimy north London suburb, are the stuff of football fans' dreams. It is unsurprising that passions are running high over the location for a new national sports stadium, which would almost certainly become the cup final's home.

The Sports Council has whittled down tha field to Wembley and Manchester. The winner will receive up to £150m in public money, mostly from the National Lottery, and might also host athletics and rugby league.

It is tempting to say that Manchester should win. That would reflect the region's passion for football and help soothe its feeling that the south gets better treatment. But there is a danger that a northern stadium would be empty for much of the year. It would also find it harder than Wembley to attract crowds.

The main case for Wembley, home to the cup final for 72 years, is that emotion and tradition are on its side. "We're on our way to Manchester" hardly has the same ring. If Wembley loses this battle, it will shrivel, sustained mainly by bookings from evangelists and Rolling Stones.

A Manchester stadium could also scupper the UK's chances of ever hosting the Olympics. Many might see that as a blessing. But to those who do not, it must be likely that after two failed bids, Manchester will never be the host. Yet any future London bid would find it hard to propose building a new Olympic-quality stadium if one already existed elsewhere.

The best answer is to pick neither. The desperation to find acceptable homes for lottery cash has obscured the fact that England does not need a new national stadium. Northern clubs are capable of holding all matches except the cup final; Manchester United's new stadium at Old Trafford will soon hold 55,000, while Newcastle United's, which has helped regenerate the city centre, holds 38,000. Wembley itself, while hardly luxurious, has been expensively upgraded.

The solution is to spread tha money and matches around. Give some cash to Manchester to build an athletics stadium, to help its bid for the 2002 Commonwealth Games. Giva some to Newcastle to improve facilities. Play many international matches in the north.

That would leava Wembley as the home of the cup final, and maybe the Olympics. It would recognise Wembley's hold on fans' emotions, but not crown it with undeserved riches.

Terms of trade

The hest remedy for European producers who have lost out in recent currency fluctuations is not compensation, hut convergence. This is the welcome, if predictable, conclusion of the European Commission's report on the subject, published yesterday.

In response to complaints from French and other "hard currency" exporters, the authors estimate that currency fluctuations over the past three years have had a modest effect on European economic activity, producing a slowdown in growth of about ¼-½ percentage point in 1995.

Yet even this "headline" estimate probahly gives too much weight to the exporters' arguments: not least the French, who are now more competitive in European markets than they were in 1987.

As far as this year is concerned, external factors, such as the decline in the dollar and the slowdown in US growth during the first half of 1995, have almost certainly had a larger effect on European growth than currency instability within Europe. Moreover, as the report notes, although a few export sectors in certain countries have fared poorly exporting to other EU countries, this has largely been due to structural and cyclical factors rather than currency movements.

To the extent that currency divergence within the EU comes from a lack of convergence among European economies, the search for solutions must clearly focus on tha prohlems of convergence. Allowing countries to compensate producers for temporary exchange rate fluctuations would be doubly ill-conceived. Not only would it probahly overestimate the size, and likely duration, of individual companies' losses, but it would impede progress towards a single European market and – hy exacerbating overspending by individual governments – that towards fiscal policy convergence.

That the Commission felt forced to list these obvious objections in a lengthy report is partly indicative of the way aggrieved producers have pressed their case in the corridors of Brussels and Strasbourg. Yet the report is clearly the first shot in a debate that will intensify in the lead-up to European monetary union.

Emu is likely to include only a handful of countries, if and when it finally takes place. This will leave even more scope for trade frictions, which will endanger the creation and preservation of a cross-European single market. The report argues, rightly, that macroeconomic convergence must precede efforts to impose currency stability on member states. The question it fails to address is whether the benefits for Europe of an all-out bid for monetary union would outweigh tha costs.

Six-legged dog out of the kennel

The Eni sale is a test of Italy's credibility and its privatisation plans, say Robert Graham and Andrew Hill

Later this morning, a group of about 150 fund managers will gather at the Plaisterers Hall in London to hear details of the year's biggest public share offering in one of the least-known of the world'a largest oil and gas groups.

The roadshow to launch the L10,000bn (£4bn) sale of a minority stake in Eni, the Italian state-owned company, began yesterday in Milan and will visit cities such Frankfurt, Paris and Tokyo, and across the US from coast to coast.

The offering is likely to attract considerable interest from international investors, marking a rare opportunity to buy a stake in one of the 10 largest oil companies in the world. But it also offers evidence that the long-stalled privatisation of Italy's principal state assats is finally getting off the ground.

At stake is Italy's international credibility on the financial markets. If the sale – which opens on November 21 – fails to win international and domestic support, it could put the country's plans for future large privatisations in jeopardy. It could also undermine the government'a plans to use the proceeds of such sales to reduce Italy's public debt in preparation for European economic and monetary union.

Part of Italy's state-dominated banking and financial sector has already heen privatised over the past two years. But political infighting and hureaucratic delays have dogged the sell-offs of Stet, the telecoms group, and Enel, the national electricity company.

The sale of a minority stake in Eni – between 17 and 24 per cent according to the draft prospectus – always looked a simpler and less politically sensitive task. But it too eeemed to he threatened by last week's government crisis, when it looked possihle that the government of technocrats led by Mr Lamberto Dini might fall. The government survived, hnt the political uncertainty may force it to set a price at the lower end of its L5,250-L6,000 range.

To maximise the proceeds, the Treasury and its advisers have launched a campaign to win the support of domestic investors. As much as half the offer could he placed with them, with the sort of razzmatazz reminiscent of the UK government's attempts during the 1980s to encourage wider share ownership through privatisation.

If anything, the Italian government has gone even further to make this a people's privatisation. Italians are among the world's biggest savers, but they have tended to invest in government bonds. Small shareholders who have bought previous privatisation issnes have often been disappointed to find the shares trading below the offer price in the months after the sale.

This time, the Treasury has said it will "insure" retail investors against any collapse in the share price in the first year of trading. If the share price declines, it will repay shareholders the amount they have lost up to a maximum of 10 per cent of the offer price – provided they have hung on to their shares for the year.

The Treasury and its advisers also hope to gauge the strength of retail demand by encouraging potential shareholders to reserve shares in Eni through a network of local banks, starting on Monday, two weeks ahead of the offer period.

That Eni is coming to the market ahead of Stet and Enel is a victory for its management, which has turned the group from a lossmaker run more as a political fiefdom into a profitable multinational. The company was founded in 1953 by Enrico Mattei, following significant gas discoveries in the Po Valley which it has since developed under a monopoly. Eni's logo – the dog with six legs – came to be the symbol of Italy's postwar development and prosperity. The buccaneering Mattei built the group up so successfully that by the time of his death in 1962, it was a serious rival to the "Seven Sisters", the largest international oil companies.

In the following years, however, Eni became a fiefdom of the Socialist party, and was one of the groups most heavily involved in the corruption scandals that broke in 1992. The entire top echelon of management was removed, including Gabriele Cagliari, the chairman who committed suicide in a Milan prison in July 1993.

Given its recent past, the decision to privatise the company taken in 1992 looked optimistic. But it proved to he the spur for restructuring, with the group turned into a joint stock company and operational control placed in the hands of Mr Franco Bernabé, managing director, who was then only 43.

Under his management, Eni has retreated from most non-core activities, with asset sales of L5,600bn over the past three years. For example, the industrial engineering business centred around Nuovo Pignone, the gas turhinemaker, was sold to GE of the US. Agip pulled out of its coal-mining interests in Australia, South Africa and the US.

Meanwhile, Enichem, the loss-making chemicals and fertilisers side, has been pruned with the closure of more than 45 plants. There were rumours that Enichem would be excluded from privatisation: hnt enough has been done for it to be included – even though some plants in sensitive areas such as Sicily still await closure.

Overall, Eni's workforce has been cut by a third in three years. Redundancy costs, coupled with restructuring, portfolio write-downs and extraordinary expenditure relating to the corruption scandals have reached L3,200bn.

The draft prospectus says the company had proven reserves of gas at the end of 1994 at 293bn cubic metres and proven oil reserves of 2,339m barrels. Mr Bernabé yesterday stressed Eni's strong profile in gas production, a legacy of the original Po valley discovery, which puts the group in a strong position to cope with the preference for this cleaner fuel over oil. Well before this shift occurred in the mid-1980s, Eni had acquired access to important gas reserves through deals with Algeria, the Soviet Union, and Libya.

Natural gas supply, transport and distribution now account for a quarter of group sales. Because of EU legislation Eni will have to forego its Po valley gas monopoly and provision has been made for this.

But Eni is now free to concentrate on important oil and gas projects in Kazakhstan, the Caspian and the Tarim basin in China which will take the lion's share of the investments over the next five years.

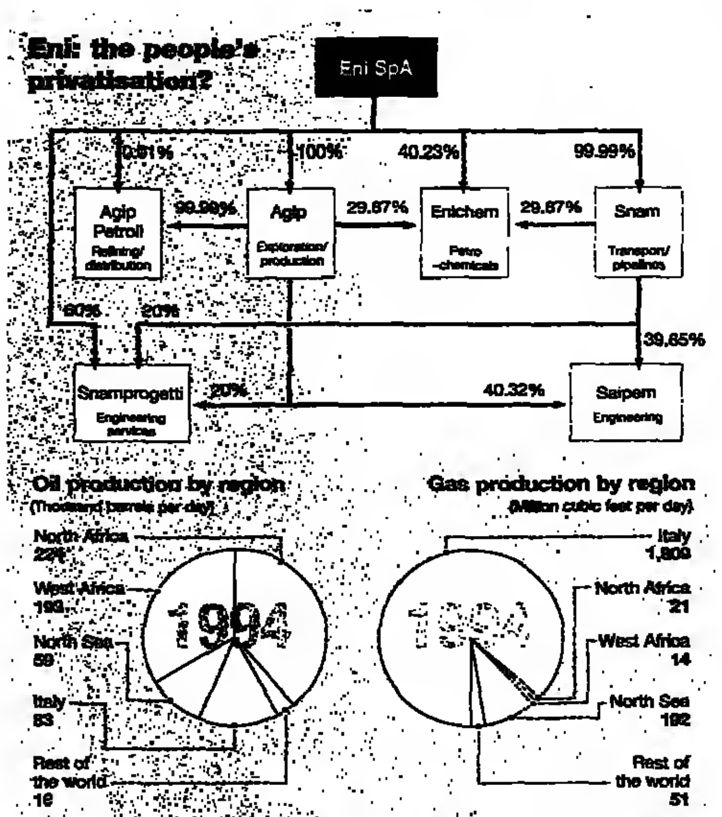
For the Treasury, the sale of Eni shares should help in developing the Italian stockmarket, which is still dominated by the traditional husiness establishment and often suhject to extreme volatility. Eni will be by far the largest quoted company in market capitalisation and the stock exchange authorities hope its weight compared with the rest of the market will have a stabilising effect. The group's shares will also he listed in New York, with all that entails in terms of additional demands for accounting transparency.

The group's size will protect it from predators, while the government will take Italy's first "golden share", giving it special powers to look after this strategic industry. In addition, there will be a 3 per cent limit on single investors and a series of safeguards for small shareholders. Those limits could be lifted after three years, with shareholders' permission. Bnt given that Italy is partially reliant on energy imports, the Treasury seems unlikely to give up majority control of Eni for some time.

"The market will want to see evidence of how Italy, as the majority shareholder, makes Eni work," says one analyst. "Is the government going to force them to do anything dumb?"

The Treasury also expects to benefit from the proceeds to huy back government honds. As Mr Marlo Draghi, director-general of the Italian Treasury, put it yesterday, the consequent improvement in Italy's deht position "should translate into lower interest rates, and less volatility" on financial markets.

However, Mr Draghi stressed yesterday that this flotation was billed as phase one of a continuing process of privatisation. The dog with six legs may still possess the same master but others may hegin to pull on the leash.



Operating income by business segment

Lire bn	1992	1993	1994	First half 1995
Exploration and production	2,178	2,975	3,732	2,615
Natural gas supply, transmission and distribution	3,252	3,107	3,132	2,075
Refining and marketing	613	1,053	633	298
Petrochemicals	(440)	(786)	386	1,346
Oilfield services contracting and engineering	128	303	258	130
Other activities	(731)	(610)	(249)	(97)
Activities to be divested	(735)	(359)	(363)	(35)
Total	4,265	5,883	7,537	6,390

Source: Company

The real reasons for public spending

PERSONAL VIEW

UK Conservatives, dry and wet, are uniting to attack public expenditure. Mr Chris Patten, governor of Hong Kong and former Tory party chairman, joined in last week. "The fastest growing region in the world has impressed on me that some reduction in the state's take of national income is an essential condition for more rapid growth," he said.

It sounds so plausible: the Asian tiger economies have smaller public expenditure than the west and they are growing faster. But the amazing economic growth of the Asian tigers mainly reflects their low starting point. As the global economy becomes more integrated, poorer countries can grow very fast hy copying the world's leaders, provided they allow free markets.

To find out how public expenditure affects growth, we have to compare similar countries – with similar starting points and opportunities for growth. As the diagram ehows for the advanced western economies, there is no relation between public expenditure and growth. The UK is among the lowest public spenders in Europe. Some countries with higher public expenditure are much more successful – notably Germany. The US, with the smallest share of public expenditure, has the slowest rate of growth.

The UK does not have the option to become a Hong Kong, where the family provides social security and Britain provides defance. But it could, if it chose, become more like the US. That is what the expenditure-cutters really want.

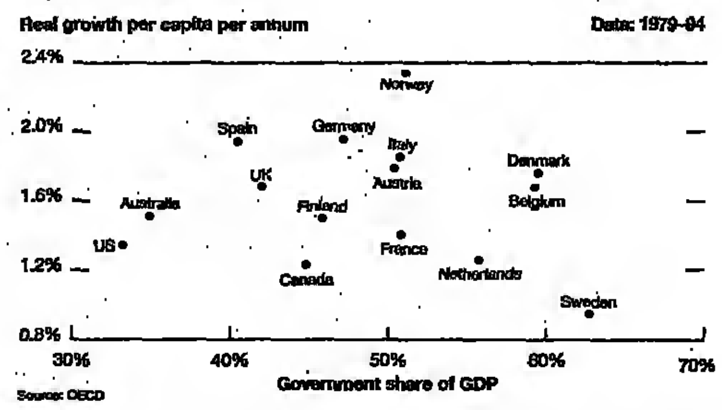
Yet they have totally failed to make any headway in achieving this objective over the past 16 years. Public expenditure's share of gross domestic product is the same as in 1979.

There are good reasons why public expenditure is so high: worldwide experience has ahown that public finance is the most efficient way to provide services such as health and education – and the demand for these services rises faster than national income. Similarly richer countries can afford to care more about equality and are thus willing to vote for a more comprehensive social security system. The US is the odd man out: as a more diverse and physically dispersed society, its voters are willing to tolerate the creation of an underclass which European voters are prepared to pay to prevent.

There is thus little point in a general discussion about whether to cut public expenditure. Advocates need to say what they would cut.

Education and training? More of this will he needed to improve growth. Health? The UK spends less on this than other countries and voters say they are willing to pay for more. I would he happy to cut spending on defence – but would Mr Patten?

That leaves mainly the eocial security system. For the old, the state earnings-related pension scheme could perhaps be replaced by compulsory minimum contribntions to a private funded scheme. But while this might reduce public expenditure, it would not reduce the "deductions" experienced hy wage earners.



For the unemployed, lone parents and long-term sick, the system also needs reform, to help more of them earn e living and end their dependency on benefits. But such reforms require help for job-seekers and the creation of work opportunities that would cost at least as much as they saved in the short run.

Puhlic expenditure is not some wasteful luxury. It aims to be an investment in a more prosperous and pleasant society. No husiness discusses its level of investment without examining the different items it might invest in. Likewise no one should talk of tax cuts unless prepared to say which expenditures they will forgo.

Richard Layard

The author is director of the Centre for Economic Performonce ot the London School of Economics.

OBSERVER

Alas, poor Yorick

■ These are tough times for the Danes in Europe. After the fiasco of environment commissioner Ritt Bjerregaard's on-off memoirs, it looks like Uffe Ellemann-Jensen, the former Danish foreign minister, won't be getting Nato's top job.

He faces an uphill struggle now that Britain, France and Germany are lining up behind Ruud Lubbers, the former Dutch prime minister.

Bjerregaard, meanwhile, continues to suffer for daring to disparage EU leaders and Commission colleagues in her diary. A new code of conduct adopted by the Commission yesterday aims to reduce the scope for freelance activities of all 20 commissioners; no one doubts that it was triggered by Bjerregaard's indiscretions.

Santer seems serious abont putting her on a tight leash. Bjerregaard cancelled at the last minute her regular weekly briefing to Danish journalists, her first media encounter since she withdrew publication of her book.

Santer aides claim he had nothing to do with it; but Commission corridors are echoing to the firm smack of leadership.

Two men in a boat

■ But is Brussels big enough for two strong Dutch personalities like Ruud Lubbers and European commissioner Hans van den Broek? The pair have e long shared history – and not a very happy one.

Van den Broek served as foreign minister for 10 of the 12 years that Lubbers was prime minister of the Netherlands. But ha finally resigned in 1992, after increasing irritation with Lubbers' tendency to stray onto his foreign-policy patch. Since taking up the EU job, van den Broek has shown no sign of missing either the Netherlands – or Lubbers. But there's an odd role reversal going on here. In the early 1990s it was always van den Broek, an ardent Atlanticist, who seemed to be destined for Nato, while there was no mistaking Lubbers' EU ambitions. Now they will probably soon be neighbours again, they can swap notes on the vagaries of history.

Wolves fox the bear

■ Settling scores with the former East Germany's old spymasters was never going to be easy, but boy, is the German judicial system making a mess of it.

Public prosecutors have only just recovered from the recent humiliation of one Germany's highest courts overturning treason and bribery convictions against Markus Wolf, the notorious former East German spymaster, saying that a German court had no right to rule on alleged spying from former East Germany.

Now they are pulling their hair out over Erich Mielke, the 87-year-old who once ran the Stasi secret police. At the weekend the prosecutors confirmed they would pay back DM390,000 to Mielke, money they had confiscated in 1990, on the grounds they had no right to hang on to it.

Now Uta Fölster of the Berlin prosecutors' office says that the cash has been blocked en route to Mialke, because another Berlin court is trying to catch him on charges of having obtained the money illegally. When – if – Mielke does get his money, there probably won't be much left. As his lawyer points out, he still has to pay his legal fees.

Brothers in arms

■ Not everything was peace and love at the Middle East and north African economic summit, which closed in Amman yesterday.

In his opening address to 1,000 businesspeople, Egyptian foreign minister Amr Mousse criticised Arab states for rushing to make peace and business deals with Israel, reminding everyone how little traditional Arab politics and jealousies have changed.

An angry King Hussein of Jordan reminded the minister how badly Egypt had done when it commanded all the Arab armies in the 1967 Arab-Israeli war, and pointed out that Cairo had signed peace with Israel 16 years ago.

Jordan TV, which broadcast almost all the press conferences live in both English and Arabic, chose to air the old US sitcom *I Love Lucy* on its English channel instead of Moussa's press conference.

Wildlife movies

■ Tired of those dull movies shown in airport departure lounges? Evidently a disgruntled employee at Kuala Lumpur felt this was the week to make a stand against mediocrity. So he fed his own collection of films to the system. Hapless passengers were treated – if such is the right word – to bouts of all-in wrestling by porno stars. It took some time for the authorities to track down the fault. There are no details on how many people missed flights.

Law of the jungle

■ Brazil has hit on a novel way to avoid irritating interventions from the World Trade Organisation – just don't tell it anything.

Earlier this month the WTO forced Brazil to abandon a quota system it wanted to introduce for car imports. The government has now decided to try to keep quiet abont other measures it has in mind – such as extending a 70 per cent import tariff for another year, and offering incentives to carmakers already manufacturing in Brazil. Rules – who needs 'em?

The Financial Times

100 years ago

Paris in 4¾ hours!

An attractive programme is put forward by Mr William Collard in a pamphlet entitled "Proposed London and Paris Railway." He starts with the statement that the existing communication between London and Paris might be very much improved upon, and in this we can quite agree with him. He goes on to formulate a scheme for a great company to construct a line between London, Maidstone and Dover and Calais, Amiens and Paris, the two being connected by e fleet of five aluminium steamers. The writer puts his case with great lucidity, but there is an initial difficulty, which he will find it very hard to get over. How is he to raise the large capital required?

50 years ago

Television invention

A notable advance in the field of television was announced yesterday by Pye Radio. At its Cambridge laboratories the company demonstrated a system of combining the transmission of vision and sound by the Videosonic system of television. The advantage of the new system is that it makes it possible for the first time to use one transmitter and receiver for both the vision and the accompanying sound.

FINANCIAL TIMES
Wednesday November 1 1995

Extra pressure on Bank of France to cut rates

Juppé hit by further rise in jobless total to 11.5%

By John Ridding in Paris

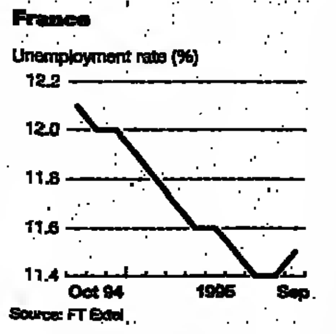
French unemployment rose sharply in September, dealing a blow to Mr Alain Juppé's conservative government and adding to pressure on the Bank of France to lower interest rates.

The 28,200 increase from the August level to 2.95m, comes as concern is growing about a slowdown in the economy and the rate of job creation. It demonstrates the dilemma facing the government as it seeks to cut its public sector deficits to satisfy the conditions for European monetary union.

President Jacques Chirac said last week that reducing the public sector deficits, predicted to exceed 5 per cent of gross domestic product this year, would be given priority, forecasting the need for two years of austerity.

To take part in European monetary union, France must meet a public deficit target of 3 per cent of GDP in 1997.

Plans to cut the FFr60bn ($1.2bn) social security deficit are raising tension between the government and trade unions. Late on Monday, the main union federations announced plans for a national day of action on November 14 in protest at welfare changes.



Source: FT Extel

Mr Juppé, the prime minister, said yesterday that he would put his proposals to a vote of confidence in the National Assembly. The move appears aimed at stifling opposition from within the conservative majority.

September's rise in unemployment, the second successiva monthly increase, took the jobless rate from 11.4 per cent to 11.5 per cent, and confirmed thet an underlying improving trend has balted. Several factors were blamed. These ranged from a biggar-tban-usoal lmpact of school-leavers on the labour market and the increased volatility of the French labour market after the rise in part-time and short-term contracts.

Officials pointed to a year-on-year decline of about 5 per cent in the number without jobs. The oumber of long-term unemployed (those out of work for more than a year) fell by about 8,300 to 1.05m, partly reflecting government-funded joh creation schemes. Yooth unemployment fell 11 per cent year-on-year, despite a rise in September.

Although slipping slightly after the unemployment figures were announced, the French franc has rallied strongly since Mr Chirac's statement on deficit reduction. It traded yesterday at about FFr3.47 to the D-Mark, compared with levels of about FFr3.51 last week.

Most observers expect the Bank of France to move quickly to reduce the 24-hour lending rate from its current 7 per cent, possibly as early as tomorrow.

Weighed down by burden of care, Page 14

Russian oil group bidders fear sale is unfair

By Chrystia Freeland in Moscow

Managers of Surgutneftegaz, Russia's second-largest oil producer, have been accused of trying to prevent outsiders from participating to the auction on Friday for control of 40 per cent of the company.

The complaints from other potential Russian bidders have raised fears that a new privatisation scheme will allow insiders to acquire the country's leading companies at bargain basement prices.

One potential bidder has expressed concern that the present managers would halt flights to the remote Siberian city of Surgut, where the auction is to be held. Another complained that his company had been told by government officials not to bother bidding.

They fear that Surgutneftegaz executives want to ensure that the 40 per cent stake is sold to bidders closely affiliated with company management at the $67m minimum price set by the government. The minimum price values Surgutneftegaz, which has extensive oilfields in Siberia and a large refinery in St Petersburg, at $170m.

The minimum price for a 5 per cent stake in Lukoil, Russia's largest oil company, had been set at $35m. But last month Atlantic Richfield, the US oil company, paid $250m for a 5.7 per cent stake in a public offering aimed at western investors.

The scheduled sale has been highlighted by the efforts of a smaller Russian oil company, Rosneft, to participate in the auction. Although the Friday sell-off is formally an open competition, Rosneft said that Surgutneftegaz managers are trying to bar its participation.

"Surgutneftegaz managers have set themselves the goal of buying their own company and they have made the conditions so difficult that no one else dared to compete," a Rosneft official said.

He said Rosneft, which decided only four days ago to try to make a bid, was afraid that "the auction commission members could suddenly get sick when we arrive or the guards could simply not allow us into the building where the auction is held".

Industry analysts backed the Rosneft claim that Surgutneftegaz managers are bostile to outside bidders. "The view of the market has very much been that Surgut is planning to huy itself," said Mr Stephen O'Sullivan, an oil and gas specialist at MC Securities in London. "The Rosneft bid seems to be upsetting the whole apple cart."

Surgutneftegaz officials made clear they would not welcome outsiders to the auction. Mr Yuri Vershinnikov, a company representative in Moscow, said he was "absolutely flabbergasted" hy the Rosneft bid.

EU currency help rejected

Continued from Page 1

market," he said. The stndy found that German competitiveness declined between 1987 and 1994, with its EU market share falling from 30.95 per cent to 24.26 per cent.

France saw its EU market share rise steadily between 1987 and 1992, with a gain of 2.5 per cent; but lt lost 0.6 per cent between 1992 and 1994. The UK saw its EU market share rise, unevenly, from 9.86 per cent in 1987 to 12.14 per cent in 1994.

Spain's market rose, too, from 3.75 per cent to 5.48 per cent, but weak currency Italy watched its market share slide steadily from 13.22 to 12.28 per cent.

Mr Monti said there was no indication that member states were actively using currency manipulation to enhance their competitiveness; central banks in weaker currency countries had spent billions of dollars in a vain effort to prop up their exchange rates in 1992-93.

Canada vote

Continued from Page 1

been seriously weakeoed. On the separatist side, a political storm erupted yesterday around Mr Jacques Parizeau, Quebec's hardline premier. Notiog that a clear majority of francophone Québécois voted in favour of independence, Mr Parizeau blamed "money and the ethnic voter" for his side's defeat.

UK court victory for lossmaking Lloyd's members

By Ralph Atkins and Jim Kelly in London

Auditors face paying substantial compensation to lossmaking Lloyd's of London members after a UK High Court judgment yesterday cited fresh examples of negligent practice at the insurance market.

The ruling, won by 2,000 Names on Merrett syndicates against auditors Ernst & Whinney (now part of Ernst & Young), could pave the way for all auditors involved in Lloyd's litigation to make a substantial contribution to the market's recovery plan.

Total contribntions could exceed £100m ($157m), according to figures floated last night by auditors. That would increase the chances of Lloyd's reaching an out-of-court settlement of the mass of litigation which is crippling its collection of debts from Names. However Names – individuals whose assets have traditionally supported the insurance market – are likely to press for a significantly higher sum.

It emerged last night that Lloyd's is discussing a mechanism for "insuring" auditors and others who contribute to the settlement plan against the cost of any outstanding litigation. That would prevent a rump of Names, who refused to sign by next spring's deadline, from scuppering a deal by threatening to continue legal action.

Mr John Mays, chairman of the Merrett Names' association, said be would probably seek £300m damages for the group's Names after yesterday's High Court victory – the first Lloyd's case involving auditors to reach judgment. He described the ruling as a "stunning victory". Those benefiting would include Sir Nicholas Lyell, attorney-general and member of the association.

Besides the auditors, a number of Lloyd's agencies bandling Names' funds, and Mr Stephen Merrett, underwriter and former deputy chairman of Lloyd's, were also found negligent in the way they handled their business.

The Merrett case centred on "run-off" contracts agreed in the early 1980s by which Merrett Names took on responsibility for claims ontstanding on policies sold by other insurers. These left Merrett Names facing rapidly escalating bills for unforeseen US asbestosis and pollution claims.

The judge ruled that Ernst & Whinney wrongly allowed underwriters to close two years of accounts in the mid-1980s which should have been left open because of uncertainties about possible liahilities, largely created hy the "run-off" contracts.

Ernst & Young said it would appeal against yesterday's judgment.

THE LEX COLUMN

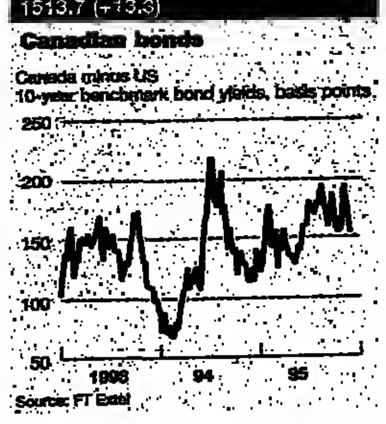
Maple Leaf syrup

Canada's retention of Quebec prompted a sigh of relief from investors yesterday; stocks, bonds and tha Canadian dollar all rallied. But the vote rejecting Quebec's independence was so marginal – it has been dubbed "le petit non" locally – that the issue has been postponed rather than resolved. The markets will now focus on impending talks between the Canadian government and the Quebec separatists. The federal government will work hard to prevent the secession of its largest province. But power in Canada is already so devolved it is difficult to see what additional concessions it can offer. In their turn, the separatists risk heing saddled with Quebec's debt mountain if they succeed. Hammering out a workable compromise will be difficult.

That will continue to divert attention from Canada's strong economic fundamentals. Inflation is low at 2.3 per cent, economic growth is steady at 2 per cent and the country is running a trade surplus. At 73 per cent of gross domestic prodoct, Canada's federal debt is the second-highest after Italy, among the G7 countries. But recent government spending cnts suggest the corner has been turned.

Under other circumstances, this would be an ideal scenario for bonds. The spread of 10-year Canadian bonds over US Treasuries has already narrowed to 150 basis points from 190 last week. Only last year, the differential was below 100 basis points. But any further rally is likely to be cut short by political uncertainty.

FT-SE Eurotrack 200: 1513.7 (+13.3)



Source: FT Extel

Pilkington

If Mr Nigel Rudd was brought in as chairman of Pilkington to get away a rights issue, he has earned his salary. Yesterday's £303m cash call, neatly packaged with two acquisitions, was greeted warmly and sent the shares up 4 per cent.

The market's reaction is also a tribute to the glassmaker'a transformation under Mr Roger Leverton, its chief executive. Profitability and the balance sheet have been restored to the point where the group can look outward again. The entire rights issue proceeds have been earmarked for expansion, both through acquisition and by cranking up capital spending.

That said, yesterday's deals are essentially defensive in nature. By buying control of SIV in Italy, Pilkington gaios modern plant with a low cost base thanks to the lira's devaluation. Together with investments in South America and eastern Europe, it makes Pilkington the world leader in antomotive glass at a time when carmakers are demanding global suppliers. The second acquisition, Interpane, fills gaps in the group's European distribution network. Pilkington sees this as vital to give it greater control over pricing.

Traditionally, investors have demanded a 30 per cent discount to the market average at the top of the cycle. As a better-run company in a stronger strategic position, Pilkington deserves better. But on current forecasts for 1997, the shares already stand at only a 10 per cent discount. Unless cycles have disappeared altogether, the shares do not look cheap.

International property

MEPC's credibility had reached such a low ebb that continental European property investors will hardly quake at the UK company'a decision to sell its European portfolio and concentrate on the US and Australia. After all, Hammerson, its more highly regarded rival, recently performed the reverse manoeuvre by selling its antipodean assets and reinvesting in France. Yet MEPC's change of tack raises tha uncomfortabla qnestion of whether the outlook for rental growth really justifies the low yields on which European properties are changing hands.

German real estate has often looked expensive from an international perspective, but rarely more so than at present. Property has become a magnet for private investors through pooled funds, resulting in more than usually demanding yields. French retail property values have been chased higher by international investors – including Hammerson – hoping to catch an upswing in consumer spending which now looks doubtful. Meanwhile, Paris office values will be vulnerable if French financial institutions decide to write down their property assets to realistic levels.

Property is an illiquid asset – and cross-border investors are rare – so pricing anomalies can endure for much longer than in securities markets. But domestic tovestors in France and Germany should pause for thought if MEPC can sell its mixed bag of European assets on a yield of, say, 6 per cent and buy US shopping centres with an income return perhaps 2 percentage points higher.

Body Shop

The desire of Ms Anita and Mr Gordon Roddick to sever the relationship between their Body Shop retail chain and its minority shareholders is hardly surprising. They have made their disdain for the City quite clear. And there has long been a gulf between investors' focus on business strategy and profits and the Roddicks ethical and environmental concerns.

This leaves outside shareholders with a dilemma. The Roddicks may feel investors do not understand them, bnt they have also been struggling to persuade bankers. If they cannot get bank backing, which is distinctly possible, investors would be in an unenviable position. Their company would be managed by people who have made it apparent that they are happier donating cash to green causes than dividends to shareholders. And the potential from selling out to a trade buyer, or reshuffling management, looks limited for a retail business so closely identified both with the Roddicks and their strong corporate culture. The short-term business outlook remains dour. All of which suggests considerable downside for the shares, if the Roddicks cannot bankroll their deal.

By the sams token, shareholders are left in a weak negotiating position if a bid emerges. The Roddicks have often argued that the City is too short-term in its evaluation of Body Shop. Investors will just have to hope that the Roddicks do not now try to cash in on the short-term decline in the share price, at the expense of those who backed the management's longer-term view.

Additional Lex comment on Thames Water, Page 24

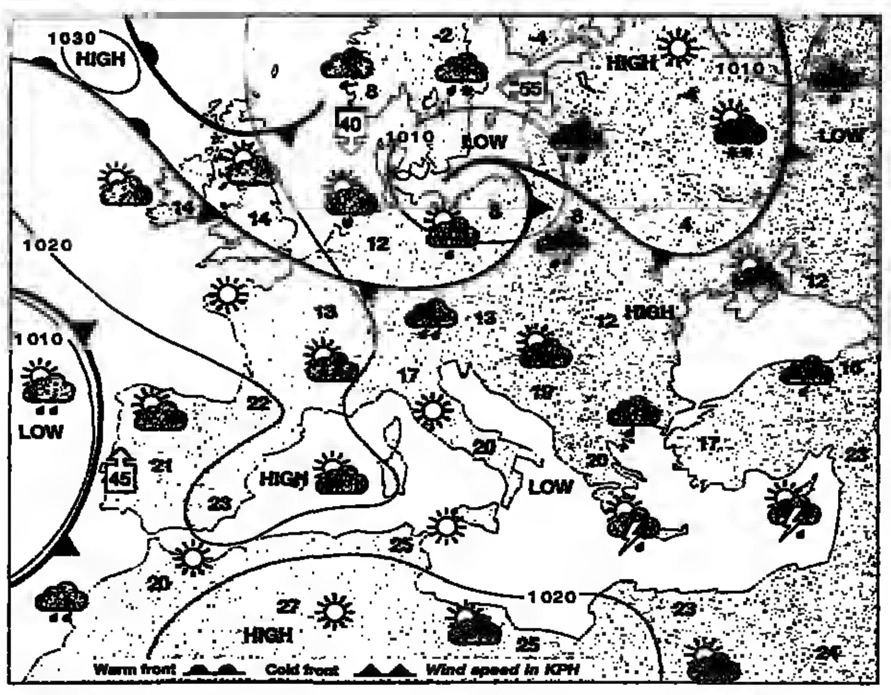
FT WEATHER GUIDE

Europe today

High pressure will move from western Europe towards the Atlantic as low pressure moves over southern Scandinavia towards the Baltic Sea. The associated frontal system will cause cloud and rain in the southern UK and southern Ireland. More rain is expected in the Benelux, Germany and Poland. Cold air north of the front will cause cloud and rain or snow showers in southern Scandinavia, the Baltic States and the Ukraine. France and Italy will have sunny periods with some fog patches. Spain and Portugal will be sunny, although a frontal system will give rain on the west coast of Portugal. Greece, Bulgaria and Romania will have sunny spells and showers.

Five-day forecast

Cold air will advance south across central and eastern Europe into south-eastern sections around a high pressure area between Scotland and Iceland. Temperatures will drop and showers will develop, especially over eastern Europe and the Mediterranean. The Alps will have snow showers from Friday. An air flow from the North Sea will promota cloud and showers in western Europe.



Situation at 12 GMT. Temperatures maximum for day. Forecasts by Meteo Consult of the Netherlands

TODAY'S TEMPERATURES

		Maximum Celsius
Abu Dhabi	sun	32
Accra	fair	32
Algiers	sun	27
Amsterdam	rain	12
Athens	fair	21
Atlanta	fair	21
B. Aires	sun	26
B.ham	fair	14
Bangkok	shower	34
Barcelona	fair	20
Beijing	sun	2
Belfast	sun	12
Belgrade	cloudy	14
Berlin	rain	9
Bermuda	thund	25
Bogota	cloudy	20
Bombay	sun	35
Brussels	rain	12
Budapest	cloudy	12
C.hagen	rain	7
Cairo	fair	24
Cape Town	fair	25
Caracas	fair	29
Cardiff	fair	13
Casablanca	fair	25
Chicago	rain	11
Cologne	rain	12
Dakar	fair	30
Dallas	shower	22
Delhi	fair	29
Dubai	sun	33
Dublin	fair	13
Dubrovnik	cloudy	19
Edinburgh	fair	12
Faro	sun	23
Frankfurt	rain	12
Geneva	cloudy	14
Gibraltar	sun	20
Glasgow	fair	12
Hamburg	shower	9
Helsinki	fair	-3
Hong Kong	fair	26
Honolulu	fair	29
Istanbul	shower	17
Jakarta	cloudy	32
Jersey	sun	14
Karachi	sun	34
Kuwait	fair	33
L. Angeles	fair	21
Las Palmas	fair	26
Lima	cloudy	22
Lisbon	rain	22
London	fair	14
Lux.bourg	rain	11
Lyon	fair	15
Madeira	shower	23
Madrid	fair	21
Majorca	fair	22
Malta	fair	24
Manchester	sun	13
Manila	shower	32
Melbourne	shower	23
Mexico City	fair	20
Miami	fair	31
Milan	hazy	17
Montreal	cloudy	5
Moscow	fair	-3
Munich	rain	13
Nairobi	shower	27
Naples	fair	19
Nassau	sun	30
New York	cloudy	19
Nice	sun	20
Nicosia	sun	22
Oslo	snow	3
Paris	sun	13
Perth	cloudy	18
Prague	rain	10
Rangoon	fair	33
Reykjavik	fair	5
Rio	rain	26
Rome	sun	20
S. Frsco	sun	17
Seoul	fair	5
Singapore	rain	31
Stockholm	snow	2
Strasbourg	rain	13
Sydney	fair	27
Tangier	fair	24
Tel Aviv	shower	24
Tokyo	fair	16
Toronto	shower	6
Vancouver	fair	10
Venice	hazy	15
Vienna	cloudy	13
Warsaw	rain	7
Washington	rain	23
Wellington	rain	14
Winnipeg	snow	-7
Zurich	fair	13

هكذا من الاصل

FINANCIAL TIMES REVIEW

Information Technology

Wednesday November 1 1995

Battle is on to control avalanche of paper in the electronic office

In the past 25 years, the volume of paper used in offices has soared by 600 per cent, despite early promises that technology would create a 'paperless office'. Today's staff often spend 60 per cent of their time working with printed documents, reports Paul Taylor

Broken promises, *false hopes* and over-optimism seem to have characterised the implementation across commerce of information technology.

For, while the personal computer may have improved office productivity, it has certainly not led to the creation of 'the paperless office'.

Much to the relief of the pulp and paper industry, the oft-predicted demise of 'hard copy' and the much-trumpeted advent of the paperless office have not transpired. Indeed, industry analysts suggest that the volume of paper used in offices around the globe, *far* from declining, continues to grow at around 20 per cent a year.

Overall, paper productioo represents one per ceot of the world's total economic output and global consumption is growing at a rate of 7m tonnes a year, fuelled by particularly strong growth in Asia.

Electronic commerce in the form of electronic mail, electronic data interchange and Internet-based transactions could, in theory, begin to slow this growth. However, EDI and e-mail remain hampered by incompatible proprietary and international standards, and there is no evidence so far that electronic commerce *actually* reduces paper usage.

Most industry estimates suggest that at least 95 per cent of information used in the office is still stored on paper, rather than electronically, despite tumbling hardware prices. One reason for this is that paper, for all its limitations, remains a particularly user-friendly medium for transmitting and reading information – most people would still rather plough through and annotate a long physical report than read it on screen.

The arrival of network computing and the associated demise of slow, dot-matrix and daisywbeel *printers* – and of the in-house print shop which often acted as a break on the use of paper – has been another factor.

In their place have come fast network printers, high-volume electronic demand printers which link directly to computers, digital offset presses and digital copiers. These can scan a hard copy once and allow image-manipulation, before churning out thousands of pages an hour.

Yet, the costs in terms of raw materials, labour and storage of paper-based processes – as well as the hidden costs of *re-keying data from paper including* the possible introduction of errors and inaccuracies – are encouraging many companies to re-examine their attitudes towards the use of electronic documents and the broader issue of office processes.

In its 1995 Technology Forecast, Price Waterhouse says: "Imaging of documents and eliminating paper copies is now an affordable technology. The costs of computer storage has dropped so that it is usually cheaper than traditional filing."

At the same time, Price Waterhouse's technology experts believe that significant *advances* in optical character recognition systems, in which documents can be scanned into computer files, will make these standard items of office equipment in the future – "imaging will be integrated into other office functions, such as storing and iodexing incoming facsimiles and other paper documents."

Other new software can help reduce tha volume of material for storage, either through the use of data compression, or by producing a precis of a document. For example, British Telecommunication's text summariser software package abridges text by extracting the most important sentences aod phrases. Users can specify the precise size, down to one per cent of the original.

The main debate over office systems, however, revolves around three related technologies: workflow management, document managemeot and imaging processes.

According to a report published last month by the UK-based Document Management Suppliers' Group, businesses spent just £200m in 1994 on document management systems. This is forecast to rise to more than £600m by 1998.

This surge in interest in document management technologies was also reflected in a recent market research survey commissioned by PA Consulting Group in the UK. A group of 255 business and IT managers from a range of sectors was asked which information technologies they were expecting to implement in order to increase effectiveness.

Four out of five were considering implementing document management, 55 per cent were planning to install worklow management systems and more than a third were aiming to invest in image processing.

The respondents believe that business pressures are making it essential to harness these technologies – "no longer are image processing, workflow and document management systems simply seen as localised solutions to a back office paper problem, or for testing in the IT department," says PA. "They are under-pinning core business operations."

According to the PA report, business managers investing in these technologies are looking for substantial benefits, including an 80 per cent reduction in the time taken to respond to customers, 50 per cent increases in operational productivity and full compliance of their business processes, products and services with the strict quality standards imposed by customers and regulatory bodies.

Similarly, a report prepared by the US-based Forrester Research group, earlier this year, identified saving money, becoming more competitive and creating and enforcing procedures as the three main forces behind the implementation of document management systems.

As one life insurance company executive told the Forrester researchers, "I expect to see a more efficieot staff aroimd here – with less time spent carrying paper around. We conducted a study in which we estimated that this "paper trotting" costs us $1bn a year."

However, hasty decisions have in the past led to disappointments, particularly in the US – "companies rushing to solve their document problems risk repeating disastrous past mistakes," warns Forrester. The US research firm argues that document management solutions that lock business documents into isolated, single function, closed systems, will not work.

The businesses interviewed by PA Consulting seem to be aware of these concerns and are also cautious about stand-alone solutions. IT managers want to integrate groupware, workflow, image and document management technologies with existing systems in order to provide their users with a unified set of IT tools accessible through a common desktop.

This approach is also reflected in new software and hardware products from leading vendors, such as Xerox, which has developed a sophisticated strategy for the digital office.

This includes suites of document management and print services software running in tandem with existing Unix or Microsoft Windows applications, together with new intelligent, multifunction networked devices such as the Xerox Document Centre machines unveilled two weeks ago in New York.

"Until now, offices have been networked, but documents haven't," says Mr Paul Allaire, Xerox chief executive. "Gains in individual output and personal productivity, expressed in the exploding growth of new digital documents from PCs, software and networks have not translated into gains in the productivity of workgroups.

"This is because a variety of incompatible user-interfaces, formats, operating systems and network environments make distributing and sharing these documents difficult."

Allaire argues that it is in the workgroup where people work together and collaboratively in teams that the collective knowledge which typically creates value is shared, built and used.

However, he suggests that much of the energy that should be devoted to the work *itself* – creating *content* and adding value to information – is diverted into working around barriers and bottlenecks and doing what most people consider are unproductive, mundane tasks. "This is a root cause of lagging office productivity and mounting worker frustration," he says.

Xerox is not the only IT vendor to spot the potential in the document management, workflow and imaging markets. As PA Consulting notes, "most of the leading vendors have already established strategic alliances so that they can provide comprehensive groupware, workflow and document management solutions."

Among the alliances, Microsoft / Wang / Sigma, and Novell / FileNet / Watermark are beginning to bring their workgroup products together in order to offer more complete support for business processes.

However, PA Consulting and others sound a note of caution – implementing document management systems can be fraught with problems.

"Many projects fall at the first hurdle because of poor financial justification or lack of top management commitment," according to the Document Management Suppliers' Group research.

The key distinguishing factor that sets apart the 12 per cent of organisations that had realised significant business benefits from document management, workflow and image processing systems, "was that they also had a driving 'ambition'," says PA.

These organisations "took full advantage of the re-engineering opportunities offered by the technology to make organisational, cultural and commercial changes within their businesses.

"They were also more open to drawing upon the practical experience of others to avoid having to learn the painful implementation lessons themselves."

The room for improvement is certainly there with significant inroads needing to be made if companies are even to get back to handling the much smaller volumes of paper used in the office 25 years ago. Some estimates put the increase in volume since then at 600 per cent, with the average worker spending no less than 60 per cent of his or her time working with documents.

■ Interview

Why Xerox has to re-invent itself

Following a period of painful restructuring, Xerox is attempting to re-invent itself as a leader in digital office systems. **Peter van Cuylenburg,** Xerox executive vice president, tells **Paul Taylor** how the the document company is positioning itself

The name 'Xerox' has been synonymous with office technology ever since the US group launched the first commercial copiers in 1948, based on technology developed by Chester Carlson, a patent attorney who produced the first xerographic image, a decade earlier.

For a quarter of a century, Xerox was to dominate tha office copier market and the profits from the business helped fund Xerox' pioneering Californian research laboratories – Palo Alto Research Centre – which produced a string of inventions including the first personal computer complete with mouse pointing device and Gui-based software, the laser printer and high-speed Ethernat networking.

Desplte this headstart, the US group allowed its pre-eminent position in the copier market to be challenged by Japanese rivals during the 1970s, while failing to capitalise upon Parc's prodigious intellectual output. Now, following a period of painful restructuring, Xerox is attempting to re-invent itself as a leader in digital office systems.

"Last year, we began positioning ourselves primarily as 'The Document Company,' and secondarily as Xerox," says Peter van Cuylenburg, Xerox executive vice president.

The former Mercury Communications chief executive who now directs Xerox's digital strategy adds: "We feel the phrase 'The Document Company' captures the nature of the change we are trying to make." This involves Xerox shedding its old image as a box-shifting copier company and becoming a digital systems and solutions company – part of the information technology infrastructure.

Part of this shift is recognising that digital products are fundamentally networked products, he says. "All the products we produce in the future will have to network with each other, network with the computer industry's offerings and integrate coherently and seamlessly."

Mr van Cuylenhurg argues that the notion of the document has been re-invented in the networked digital systems era – "we have begun to think of the document as the user interface between people and processes... it is getting precisely the right information in front of the right person at the right time."

Only then, says Mr van Cuylenburg, "can people conduct the process that they are engaged in with the ultimate productivity – what we call the new productivity.

"For example, I get monthly business reports from all my division presidents. Each one is in a different formal and

> New products will network with the computer industry's offerings and integrate seamlessly

none of them answer the questions that I would really like to ask. I would much rather have all that information submitted on to a server and have some software agents assemble that information in the way I know I want to read reports. That is what the document is all about.

The emerging field of document management is the sort of software that will make that happen, he adds – "it's a very new field, it's not really defined yet. We think we are playing a leading role in defining it, we would like to be the Microsoft of document management".

Does the Xerox concept of the document relate only to physical entity?

"No, absolutely not," says Mr van Cuylenburg. "It relates to an encapsulation of the information a person neads, in whatever form they need it. The document is primarily an electronic artifact.

"We talk about the input, output and management phases of a document," he says. The input phase is when the document is created by a computer application, scanned-in or captured and it begins its life form in the electronic domain. During the output phase, the document is viewed, printed or electronically distributed. The management phase is where value is added to the content and includes functions such as summarisation, translation, abstraction, compilation, authentication and authorisation.

Mr van Cuylenhurg says "the new Xerox" wants to add value across the whole cycle rather than just focusing on a small element of the output phase – printing. "We want to pick up *immediately after* a document is authored in the input stage."

In the same way that word processors, spreadsheets, databases and presentation tools have evolved into the concept of a suite of tools, such as *Microsoft Office* in recent years, Xerox believes exactly the same thing will happen to document management – "I think all of us will have resident on our clients and servers not only a suite of computer applications, but also a corresponding suite of document management tools," says Mr van Cuylenburg.

He believes this suite of document management tools will comprise a number of components including:

☐ Workflow software: This enables a process to be scripted. People then follow the script which determines which route information follows and how value is added during the process – for example, entering a sales order in a company.

☐ Archiving and retrieval: in the object-orientated software world, documents or components of documents will be stored with an unlimited set of intelligent attributes enabling the user to compile a particular document, based on a scripting process that ties into those intelligent attrihntes.

☐ Library services: These provide check-in and check-ont functions, control the release of documents, provide security features and control who is doing what with information in the enterprise.

☐ Document services: These include a range of services that have not really formed themselves into new categories yet. For example, document summarisation and abstraction – "we have software now where yon can take something like a 12-page Harvard Business Report, run it through abstraction software which recognises the word roots and the structure of the linguistics of the document, and it will give a reasonably intelligent abstract," says Mr van Cuylenburg.

The Xerox concept of digital documents also embraces multimedia.

"As soon as yon talk about electronic documents, you are, of course, including multimedia," says the Xerox executive.

"I don't think we can yet conceive of all the services our customers might want to eventually apply to documents."

Will 'The Document Company' be more successful than Xerox was in the past at exploiting these new opportunities?

Mr van Cuylenburg is positive the answer is "Yes" – "in the past, the gap between making copiers and putting out the Maclntosh user-interface, which was effectively what we did, was enormous. And it was very hard to see how yon put the two together. What has happened now is that tha core business has itself mntated from being a copier business to being a printing business and printers are connected to networks and therefore printers are automatically components of the information technology system.

"Printers have controllers in them; they have computers that run them, that talk to the network that receives data process data so yon suddenly have a platform for the sort of innovation that Parc has done in the past.

"We have developed what we call a 'middleware' strategy which says we are going to populate the layer between document platforms and end-user applications with middleware that allows our customers to construct document systems and document solutions across their enterprise network. That has provided a framework for all the innovation which comes out of Parc to be applied to market."

He also maintains that Xerox has a key advantage because, unlike the computer industry, it has a clear understanding of 'the document space' – the way people really use information in real processes that they are engaged in.

"The computer industry has never really addressed that problem before," says Mr van Cuyleuburg. "It has produced applications that process chunks of data and have end-

> The concept of digital documents also embraces multimedia

results, but they haven't got into the services aspects of it."

Now Xerox is forging alliances and partnerships with other industry players to ensure that the enabling technology for document management and enterprise print services becomes an industry standard and is built into fnture operating systems, applications and hardware.

In the meantime, Xerox has already implemented a number of these document management software tools. For example, many of the new scanners and multifunction devices appearing in the market incorporate the group's proprietary scanning and optical character recognition software products. Other products, such as Unix and NetWare print services, should be on the market in 1996.

"We shonld have a pretty complete portfolio of what we call 'the network document environment' by the end of next year," says Mr van Cuylenburg. Despite the growth of this software husiness, the vast majority of the group's income for the foreseeable future will contlnue to be derived from hardware sales.

Bnt unlike the past, these sales are likely to be driven by the increasingly sophisticated embedded software capabilities of the hardware.

"The software will become a driver in our business," says the Xerox digital strategist.

Peter van Cuylenburg argues that the notion of the document has been re-invented in the networked digital systems era – "we have begun to think of the document as the user-interface between people and processes," he says.

■ Interview

AT&T's offspring will aim high

Lars Nyberg of Global Information Systems, tells **Michael Dempsey** how he aims to make GIS a world-leader in a fierce market

When AT&T Corporation approached tha chairman of Philips Communications Systems division with a joh offer, his friends were mystified. Lars Nyberg, a 48-year-old Swede living in the Dutch town of Eindhoven, was being offered pole position at Global Information Systems, or GIS. What, his colleagues asked, is GIS?

AT&T took over NCR in 1991. Last year, NCR became GIS in the latest in a string of tactical moves in a fiercely competitive market for computer systems and services. Three and a half months after Nyberg arrived at GIS' Dayton, Ohio headqnarters, AT&T announced a revolutionary demerger of its sprawling operations into three separate, publicly traded companies.

One company would deal with communications services, another with communications equipment and the third, operating as GIS, would handle computer systems. Nyberg joined GIS at Dayton in June. He heads up a $8.5bn worldwide computer husiness that employed 46,000 staff before the latest restructuring was announced.

Its product offerings ranged from high-powered processors churning mind-boggling quantities of corporate data to a brand-new family of personal and portahle computers, tha Globalyst series.

Nyberg's new charge has a wealthy parent: AT&T is digging into its deep pockets to fund the $1.5bn charge that GIS' restructuring will incur. With this kind of benevolence behind him and a top post under his belt, surely Nyberg feels that Christmas arrived very early in 1995?

Nyberg reacts fiercely to the suggestion that GIS has been sent out into the commercial world with a corporate silver spoon in its mouth. AT&T has given him 18 months to produce a healthy concern in computer systems – "we have to execnte a turnaround," he says.

The obvious route to restructuring lies in trimming back the workforce. GIS has earmarked 8,500 jobs for cutting. But this is hardly original, and Nyberg knows that reducing the head-count does not alter business fundamentals – "I've never seen a company remain profitahle just by reducing expenses."

He is adamant that GIS will not enjoy commercial health on the back of wave after wave of redundancies. The dilemma Nyberg faces is common to every other large IT manufacturer. For the past five years, the industry has talked of refocusing husiness activities to address customer needs. Every single player has pledged to move away from the world of computer manufacture – where margins are under phenomenal pressure – and into the lucrative services sector.

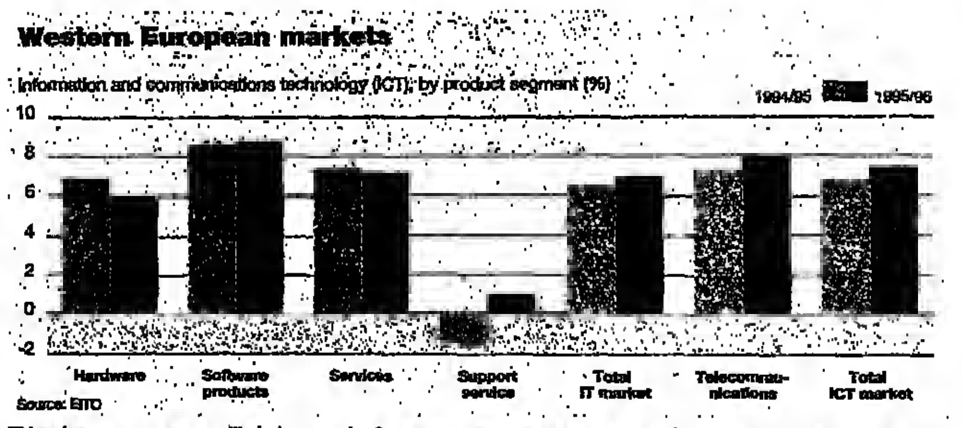
People cost less than factories, especially if they can be kept out 'in the field' and away from central offices. Managing large projects has also become the favoured activity of all IT players. But there are only so many projects, and they are pursued by companies singing the same tune.

Nyberg believes "people are the key". He slips into current AT&T jargon, using the term "associates" to describe his 46,000 colleagues. He has spoken to hundreds of staff since his arrival, and claims that the demerger has not dented their faith in GIS' future – "there is a sense of relief in the company. Now we are on our own

Continned on page four

Lars Nyberg: 'Our fate is in our own hands'

Western European markets



IT hardware revenues are likely to grow by 6 per cent next year, according to forecasts by the European IT Observatory. Software revenues in Europe, growing at 8.6 per cent this year, could rise to 8.6 per cent in 1996

FT IT **Information** Technology

Editorial production: Michael Wilshire

Writers in this issue (volume 1, number 9) include: Paul Taylor, Louise Kehoe, Claire Gooding, John Kavanagh, Philip Manchester, Michael Dempsey, Tom Foremski, Geoffrey Wheelwright, George Black, Julie Harnett, Nuala Moran, Jola Shillingford, David Lawson and Stephen McGookin

Graphics: Ranjit Dhillon and Bob Hutchison
Illustrations: Paul Shorrock (page 1) and John Springs (page 2)
Picture research: Matthew Glynn

● The next issue of the FT-IT Review on Wednesday, December 6, 1995 will include the following key themes:

● Home and home office computing and communications
● Software: focus on accounting packages
● Special report: the Indian software industry
● IT directions: intelligent systems
● An index of topics covered by the FT-IT Review in 1995

For more details of the next issue, please see announcement on back page of this Review. In January, 1996, the FT will publish an FT-IT special report: An A-Z Guide to the Internet. In February, 1996, a key theme will be IT in government

● For details regarding advertising and future issues, please contact:
Simon Later or Dolly Corcoran,
FT Advertising Department in London on telephone (44) 0 171 873 4129 or fax: (44) 0 171 873 3062.

● In the US:
New York: Gavin Bishop, tel. (212) 745 1342.
San Francisco: Nick Mayle, tel. (415) 637 9775.

● Background information for editorial consideration may be sent to:
Financial Times,
One Southwark Bridge,
London SE1 9HL
Fax: +44 (0)171 873 3197

هكذا من الأصل

■ The shape of things to come

The digital era heralds an office transformation

The fully networked office of the future will provide staff with access to vast amounts of feature-rich information and services. Paul Taylor reports

Advanced technologies are driving the convergence of office computing and telecommunications, turning the dream of an integrated digital office into reality and enabling companies to achieve real business benefits.

Office technology is providing the tools which allow companies to function more efficiently, improve business processes, reduce time to market and, perbsps most importantly, serve their customers better.

In particular, the sdvent of the desktop personal computer, computer networks and sdvanced digital telecommunications have changed the way information is collected, analysed and stored. At the same time, these technologies are converging, blurring the traditional distinctions between data processing and telecommunications and enabling new value-added services, such as video-conferencing, electronic mail and multimedia services, to be delivered to the desktop.

More broadly, digital technologies sucb as client/server computing, workflow software, computer-telepbony integration, broadband multimedia networks, document management systems, wireless communications and electronic commerce are transforming the office environment in the 1990s and changing the way companies do business.

Sales forecasts

The growing dependence of commercial businesses, big and small, on information technology was bighlighted by BIS Strategic Decisions, the market analysts, which forecast that small businesses in the US will spend more tha $73.6bn this year on PC, telepbone and image-based products and services, 40 per cent more than in 1992.

Overall, there are an estimated 150m to 200m PCs and workstations in use across the globe, most of them in company offices or homes. This year, about 60m Pcs will be sold, a 20 per cent increase over 1994. Within the next few years, sales of PCs are projected to break through the 100m-level exceeding annual sales of television sets for the first time.

Each new microprocessor generation brings more power to the desktop at the same or lower prices - Intel'e Pentium Pro chip launched today has over 5m transistors and is designed as a springboard for Intel'e assault on the scientific and technical workstation market as well as processing intensive applications like multimedia.

Snch high performance is required to handle the increasingly sophisticated and power-hungry software developed by Microsoft and others - including the new 32-bit operating systems euch as Windows NT, Windows 95 and IBM's OS2 Warp.

Most office machines are now hooked together, using hard-wire and wirelese telecommunications links to form local and wide-area networks (Lans and Wans) and which can share data and peripherals like printers, compnter-based fax machines, scanners and other equipment. This trend has turned the makers of interconnection equipment, such as routers and bubs, into some of the fastest-growing businesses in the industry.

In Europe alone, an estimated $4bn will be spent on internetworking products this year from companies such as Cisco, the worldwide internetworking product markst leader, 3Com, and Bay Networks - formed a year ago when SynOptics and Wellfleet Communications merged.

Similarly, the continuing shift from mainframe or departmental minicomputer towards client/server computing, even for mission critical applications - a process of compnter platform substitution dubbed 'downsizing', or 'rightsizing' - has led to the emergence of a raft of sophisticated new software products.

These include network management tools aimed at improving the management complex client/server networks and workflow software which allows users to organise, automate and manage business processes, co-ordinate the work of individuals and integrate the data and documents required to support the work process.

Companies are also making greater use of valne-added communications services such as electronic mail and electronic data interchange to improve business communications, cut costs and improve productivity.

Within the office, voice technology is being used more extensively in voice mail and routing systems to improve customer service. Similarly, mail order companies, customer service desks and others are using computer/telephony integration products to streamline operations and cut costs.

At the same time, networking specialists such as Novell, which has become the undisputed market leader in networking software with around 72 per cent of the global network operating system market according to IDC, and companies like Xerox, the document company, are working on building more intelligence into network devices such as printers and scanners.

Another significant trend is the appearance of multifunction digital devices which combine some or all of the features of a facsimile machine, photocopier, laser printer and scanner - "today, we have too many separate boxes, too many separate delivery channels," says Peter van Cuylenburg, Xerox executive vice president, *(see facing page)*. Xerox, along with other companies, including Hewlett-Packard, has started selling a range of multifunction machines.

Other 'inefficiencies' in the office equipment infrastructure have also been attracting attention. In particular, the lack of flexibility and unnecessary costs imposed by hard-wired telecom links are being challenged by new wireless alternatives.

Cordless telephony, wireless networking and infrared links between devices are all expected to play a bigger role in the office of the future. Most PBX (privete branch exchange) manufacturers have already launched digital cordless voice systems. Similarly, wireless Lans linking desktop computers, workstations and other devices, without the need for fixed cabling heve begun to appear.

Outside the office, a growing number of businesses are already using digital cellular telephony, portabls computers and mobile data networks to exchange information between the central office database and mobile employees such as salesmen or engineers.

Meanwhile, the volume and variety of information requiring delivery to the desktop is set to grow rapidly as desktop video-conferencing and multimedia applications become increasingly commonplace.

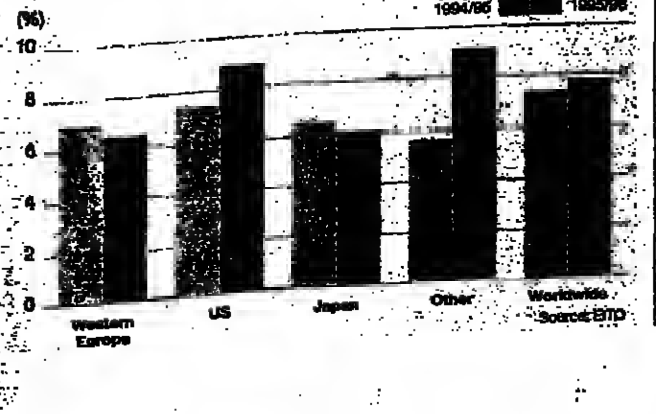
But the growth of data-intensivs spplications is pushing existing networking technologies to the limit and fuelling the search for an enterprise-wide, high-speed network technology capable of carrying all an organisation's electronic traffic.

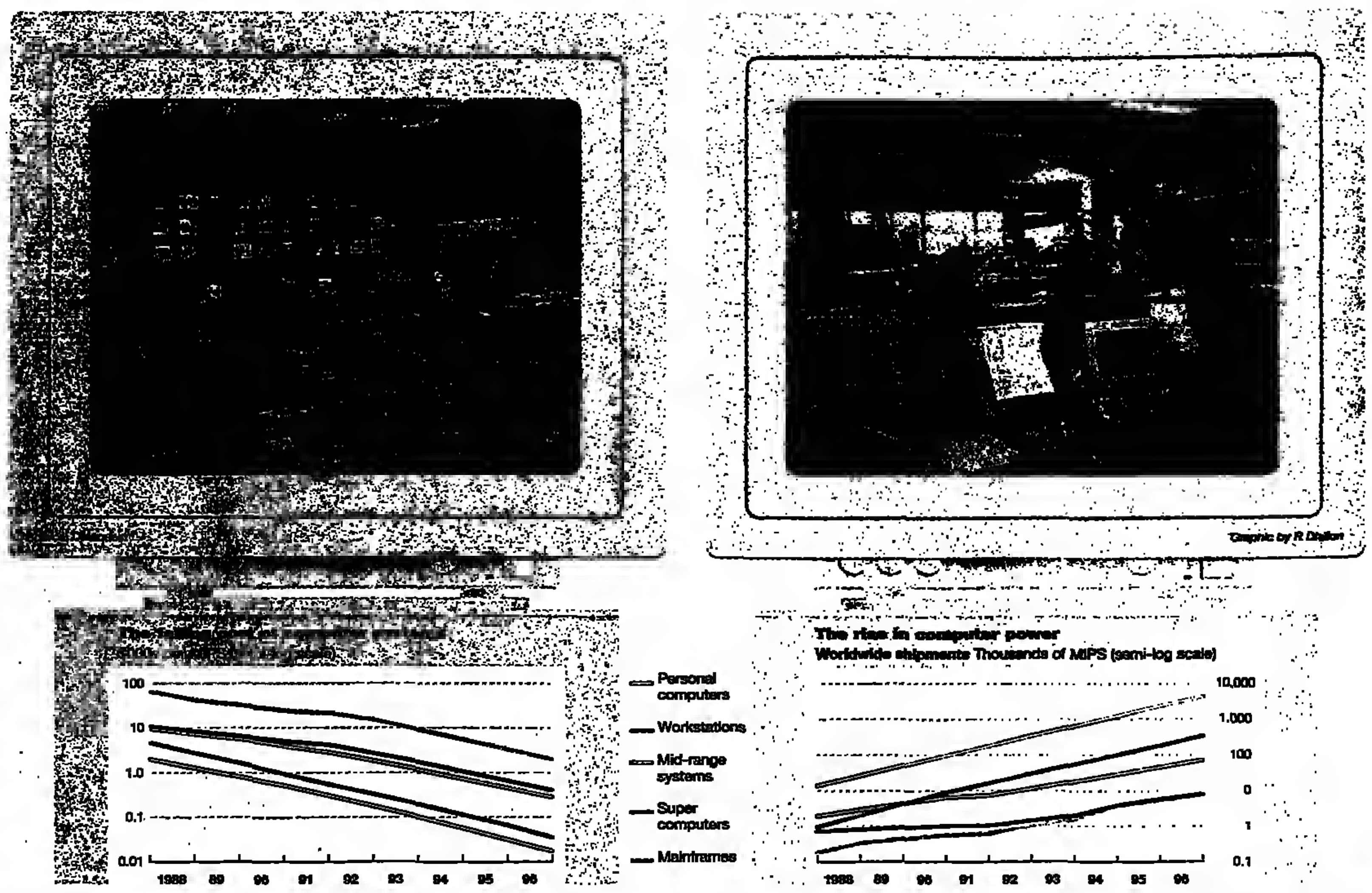
The main candidates appear to be Fast Ethernet and Asynchronous Transfer Mode (ATM) which will be capable of supporting deta, voice, graphics and video. As they are adopted, the remaining distinctions between office voice and data lines are likely to vanish.

The fully networked office of the future will provide its inhabitants with access to vast amounts of feature-rich information and services, both inside and outside the organisation, and the means to process, analyse and act upon it.

"Ultimately," says Cuylanberg of Xerox, "you will be able to sit at your PC in the office and tap into any of the company's business processes and to any information service outside the company you may need to use all in an integrated and seamless way."

For some companies, the requirement for a physical office may even disappear entirely. Instead, the employees of the 'virtual corporation' may work from bome over high speed data links, conduct meetings by video-conference and arrange transactions hy secure electronic-mail across the Internet.





Graphic by R Dillon

■ Personal computers

Report by Paul Taylor

Spotlight on ownership costs

The average five-year cost of networked PC ownership has risen from $19,000 in the mid-1980s to more than $40,000 today, say analysts

Since the early 1980s personal computers bave trasosformed corporate data processing hy putting real computing power on the desktop and into the hands of end-users.

More recently the oetworking and inter-networkiog of individual PCs across departmeots, sites and eoterprises has begun to reshape business operations, *enabling new forms* of communication sucb as electronic mail and desktop video-conferencing and further hlurring the distinctions between computing and telecommunications. According to Dataquest, the market research firm, 70 per cent of business PCs in the US and almost 60 per ceot in Europe are already connected to local area oetworks able to share informatioo and access to peripberals, aucb as printers and scanners. In many large offices, distributed or client/server networks based on desktop PCe and specialist servers have replaced tbe traditional departmental minicomputer or mainframe, even for mission critical applications on wbicb companies depend.

By the eod of this decade, nearly three-quarters of companies are expected to bave moved all their applications over to client/server systems.

In the process, the traditioual mainframe – or its equivalent powered hy standard CMOS-based microprocessors – has found a oew role as a corporate informatioo warebouse or large-scale enterprise oetwork server.

The move to oetworked computing, coupled with the fast growing home market, has belped fuel the surging sales of *PCs which will grow by almost* 30 per cent this year in Europe. Within the oext few years, global PC sales are projected to top 100m units a year, up from around 65m this year. Dataquest predicts that the PC market, which was worth $95bn last year, will reach $185m in 1999.

As technological advances and competitive pressures continue to drive down the cost of higb performance computing, the mix of corporate PC sales is also changing – although vendors such as Dell Computer, the direct sales specialist, report that actual purchase prices *remain steady* as purchasers specify multimedia options such as CD-Rom drives, sound cards and bigger monitors.

Sales of PCs based on Intel's Pentium microprocessor have already overtaken those based on 80486 DX2 chips in the US and Dataquest expects the pattern to be repeated In Europe during the fourth quarter as Intel cuts the price of Pentium processors to make way for the new Pentium Pro.

> Most PCs for the corporate market are sold 'network-ready'

Andrew Grove, Intel's chief executive, has made clear that Intel has set its sights with the Pentium Pro on the workstatlon market, accelerating the trend towards the merging of the PC and workstation markets which was already apparent.

Despite some initial caution, corporate PC sales are also likely to be spurred by the arrival of Windows 95, Microsoft's new operating system. Many companies bave already cut tbelr PC replacement scbedules from five to three years and the arrival of Windows 95, coupled with the growing peoetration of Windows NT in some markets such as financial services, is likely to further hasten npgrading.

Meanwhile, the ahift to PCs and networked PCs, in particular, has cast a apotlight on the cost of ownership of PCs themselves as corporate buyers have become increasingly concerned about obtaining valoe for money from their IT budgets. A recent report by the US-based Gartner research group shows that on average, the five-year cost of networked PC ownership had risen from $19,000 in the mid-1980s to *more than $40,000 today*.

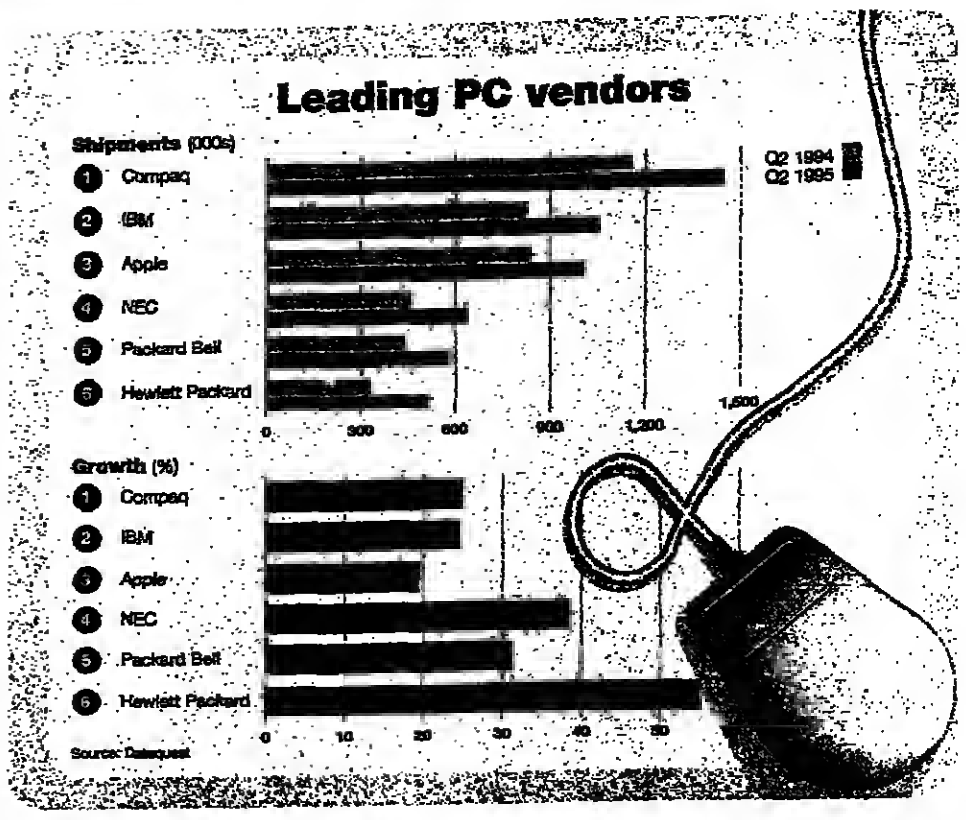
Only 20 per cent of the total cost associated with networked PCs is related to the initial purchase. The other 80 per cent includes the on-going cost of ownership such as training, inventory tracking of hardware and software, software audits and updates, technical support, user downtime, data loss from system failure and so on.

To address this issue, most corporate PC vendors including Compaq, the market leader, International Business Machines and Hewlett-Packard, have begun to build features into their systems designed to improve manageability and cut the cost of ownership.

Meanwhile, network managers are turning to specialist software packages to belp them monitor the network, improve its performance and predict problems, or to outsourcing companies to maintain and develop desktop applications.

Most PCs destined for the corporate market are already sold 'network-ready' and the market for powerful network servers has become one of the most dynamic and fiercely contested segments of the computer industry. The fastest-growing segment of the $11bn-*a-year server market is for* Internet servers, computers which provide access to the Internet for local area networks and provide corporate World Wide Web sites.

Sun Microsyetems is the leader in this field with an estimated 56 per cent of all servers on the Internet, followed by Sillcon Graphics whoee Webforce line of servers can handle thousands of WWW transactions per minute.



However, Hewlett-Packard has one of the widest ranges of server products, ranging from personal computer-based workgroup servers to 'mainframe alternative' servers thet can be used to support the operation of a company-wide network.

At the other end of the scale is the market for local area network (Lan) application PC servers. In this segment of the market, which is growing at about 45 per cent a year, Compaq has the leading market share with its ProLiant line of servers. The latest ProLiant model comes with up to four Intel Pentium microprocessors and up *to one gigabyte of memory* and delivered with a selection of software pre-installed, according to customers' cholces. Compaq claims that these top-of the range PC servers, which are aimed at workgroup or departmental Lans, provide the performance of a mid-range minicomputer at *sbout half of* the price.

■ PC networks

Report by Tom Foremski in California

Better ways emerge for collaboration in the workplace

PC local area networks and the Internet are the route to rapid group communications

From personal computer-based local area networks *(Lans)* to the Internet, the PC is rapidly evolving into a communications processor enabling groups of people to collaborate on projects regardless of their pbysical location.

Tbe popularity of the Internet, whicb links tens of millions of PC users around the world, is beginning to make its influence felt in the area of Lans. Not only with the Internet communications protocol *TCP/IP, which is becoming an* important standard, but also in how companies are increasingly relying on Internet cooections to link their Lans with eacb other.

Most Lans are based on the popular client/server model in wbich a more *powerful* PC, the server, connects PC users, the clients. This architecture has proved to be a good way of providing relatively fast connections between users. But as more clients are added, the client/server architecture is less scalable and less able to handle increasing numbers of users. It is also more prone to failure – if a server goes down for any reason, it can leave bundreds or even thousands of users *without* their *vital* network connection.

The Internet, bowever, is a mucb more scalable architecture and less prone to being disrupted if some of its computers go down. For example, at Intel earlier this year, the *company's* main host computer went down for several hours, knocking out network communications for tbousands of users. But those users that relied on the Internet to communicate had no problems.

The Internet is designed in such a way that messages can be routed around any problem areas and will still reach their destination. It is a design that is a relic of the cold war; tha US Department of Defence *specified* that the Internet *communications* network must be able to continue functioning, even if parts of it were to be knocked out during a war.

The main weakness of the Internet, however, is the lack of security. With messages being routed through many different computers, there is the possibility that someone could intercept part or all of the message. But this is a relatively trivial problem and can be solved using encryption technologies.

"Tbe Internet is a moch more scalable architecture than client/server and eventually there will be little difference between an organisation's internal network and the Internet *as a whole*," says Steve McGeady, vice president and general manager of Intel's Internet Technology Labs.

Intel is working on developing new kinds of Lan technology that moves away from the client/server architecture and uses an advanced peer-to-peer architecture. With peer-to-peer, there is no central server. Instead, each PC connected on the Lan ects as both a client and a server. Intel is developing special software that distribntes server functions across all the users. And the more PCs connected, the more powerful and more robust is the network.

"Essentially, any large network of a few bundred PCs is much more powerful than any server. If you can co-ordinate and distribute the task across them," says McGeady.

Intel has also borrowed other features from the Internet: instead of mansgers sending out electronic mail to their staff, they simply post the uniform resource locator of their personal web page which specifies where staff can obtain the latest status report instead of sending out the document as e-mail. This way, it not only cuts down on network traffic but it also means that people see the latest version of the document.

In order to make Lans more Internet-like, the security issues must be solved. Most observers believe that instead of trying to restrict entry to company Lans from outsiders, it makes more sense to keep networks open but to encrypt everything.

However, encryption technologies have become a political issue in the US with the Department of Defense classifying powerful encryption technologies as munitions. This means that there are restrictions on exporting secure network technologies and, thus, there is less incentive to develop those products.

PC Lans and the Internet are the enabling technologies for new ways of working, with the focus on groups of people collaborating on a project. With high-speed communications links and improved video-conferencing technologies, it becomes easier to link people In various locations In a virtual office. It removes the limitations of traditional offices In terms of location and time zones.

Companies such as Andersen Consulting, are developing products that make possible virtual organisations tbat involve staff from different locations around the world to work together on various projects. Using Lans and Internet connections, users can converse with one another, take part in video-conferences and access-shared work files.

Lans also provide large organisations with a way to standardise training materials. Pacific Bell, for example, is pioneering the use of Lans to deliver multimedia-based training materials to staff. The company says that this method is an improvement over the distribution of paper-based manuals which are difficult to keep updated. And the multimedia nature of the training materials makes them more effective in training staff.

Pacific Bell says that it is saving several million dollars a year by using lts Lan-based training system and plans to extend its use throughout its organisation.

Lans are also a good way to give staff access to information as they need lt. With fast changing markets, companiea need to be able to respond to new markets more quickly than before. Providing their staff with the right information at the right time is possible with Lan-based systems.

At tbe Xerox Palo Alto Research Center, researcbers are also examining ways in which Lans can be used not only to distribute information but also to collect information from staff in a bid to develop a central knowledge database that can be shared.

As staff develop skills, an organisation will be able to build up a valuable store of knowledge that can be used in future projects.

Abrupt end to a product range

GIS axes the Globalyst PC

Continued from page 2:

and our fate is in our hands," he says.

The world of GIS/NCR has been in state of constant flux. Recent directives from Dayton have encouraged staff to see themselves as playing in teams, with managers sheepishly proffering business cards bearing the title 'coach' in place of more conventional ranks. This kind of management vogue is all all too familiar to the thousands of executives who have been made redundant by the *IT sector* since 1990.

It does look as if Nyberg needs one mission to infuse his staff with a fresh sense of purpose and set GIS apart from the berd of computer-makers stampeding into services. His definition of this purpose is that GIS must "lead the world" in a small number of chosen vertical markets.

The term "world-leader" hovers on Nyberg's lips. It is an article of faith with him that GIS can thrive by ignoring the distractions of a mass market and exploiting its proven expertise in precisely defined areas. The company has an acknowledged talent in banking and its sntomatic teller machines are synonymous with retail banks all over the glohe. But he says the new GIS will "think hard" before extending its definition of the finance sector to include insurance.

Under Nyberg, GIS aims to concentrate on sectors with whicb it is intimately acqainted. The new Workmark series of commercial processors mark a first step In this direction. They are custom-built to suit the demands of retail clients.

Nyberg's idea is to cultivate high-value customers who are implicitly "super loyal" to GIS. He knows the recent history of the computer industry has seen usars in revolt against *suppliers and unsettling complacent IT companies.*

The Nyberg vision for GIS seems to involve a different axis of power between IT company *and customer. If he can* create a bond, based on user-recognition of GIS' specific talents, then it is worth devoting time and resources to projects tallored for those users. This, in turn, could deliver the world leader cachet that Nyberg covets.

The new Workmark series of commercial processors are custom-built to suit the demands of retail cliants. A company that really does work hand-in-glove with users over prolonged periods, allowing them to direct research and product development, would be tbe first of a new breed of IT player.

The language of supplying solutions for vertical markets has grown utterly stale in this business. While every company selling hardware and or software repeats the same mantra, very few appear to have bothered to think through the lmplications of tackling selected fields. Will Nyberg's GIS have the courage to turn down contracts because they do not fall within the new-customer parameters?

Under Nyberg, GIS bas already taken some tough decisions. The Globalyst PC range was axed, with the closure of plants in Germany and the US, within five months of its launcb. On the surface, this was an example of a company moving out of peripheral businesses to concentrate on what it does best.

Price competition has made the PC hardware business an uncomfortable place to be. But selling own-brand PCs is something of an identity badge for big IT companies.

Nyberg says he is looking for a third party source for PCs, hut to depart an entire market so dramatically must have been a wrench for the executives who had just organised the Globalyst launch.

The PCs themselves appear to have been well-received. Nyberg is reluctant to admit that he walked through the door in Dayton with a mission to axe Globalyst – "I had an opinion when I moved in, but we had a discussion on the PC issue."

His argument is that while GIS could sustain a profit margin in this line of manufacture, the aupply of PCs does not dovetail with the company's akills set. The swift execution of an entire product-line suggests that he is very serious about changing the course of the husiness.

The GIS name is unlikely to stick. Nyberg allows for some nostalgia when reflecting on past glories – "some customers say they'd love to see the old NCR great again. The name NCR did carry a lot of weight, but it comes with 110 years of history that don't sit well with a post-industrial economy."

Nyberg admits to similarities between Einhoven, known as 'Philips Town' for lts dominance by one company, and Dayton, where NCR ruled the *roost for many years* – "emotionally there are some parallels," he says.

Worldmark was launched at a Chicago conference where an observer from Coca-Cola paid Nyberg an oblique compliment – "it could be said that AT&T is a very well-kept secret in the market," he said. Whatever initials sit on the company letterbead and however Nyberg fashions its identity, GIS has to abandon tbe comfort of AT&T's support and spread lts name about in a harsh commercial world.

■ Business Software Challenge: Winners will be announced next month

Finalists selected from record 1995 entries

This year's 'Business Software Challenge 90s' design competition has attracted the largest-ever number of entries from students at higher education institutions across the UK.

The winniog software designs in the previous four years have covered a diverse range of applications – for example, a system for colour-blindness testing, a management package for a small hotel, a mathematical modelling package for non-specialists, a system for belping in the care of patients with heart problems plus a sports tournameot management information system.

The judges have now short-listed eight entries from the largest-ever response since the competition was launched in 1990. The closing date for this year's entries was September 1. Students contributing this year's short-listed entries have now been invited to make presentations this month.

The category winners will be announced at an awards ceremony in central London on Friday, December 1. The guest speaker will be Judith Scott, chief executive of the British Computer Society.

Prizes

The competition is sponsored by Computer Associates, the software company, and ICL, the computer and information management company, and is supported hy the Financial Times Review of Information Technology.

The Software Challenge encourages atudents and recent graduates from any level and discipline to submit software designs which meet the needs of business. *Prizes of* cash, hardware and software, valued together at £20,000 are offered to the winners.

Details of the 1995 winning entries will appear in the next issue of the FT-IT Review on Wednesday, December 6.

For details of the annual competition, write to:
The Competition Secretary,
Business Software
Challenge 90s,
7, Bayley Street,
London, WC1B 3HB

■ Portable PCs

Report by Michael Dempsey

Computing on the move does not come cheap

Portable computer market thrives on 'an image of convenience'

Marketing and advertising campaigns portray the increasingly powerful portable PC as a convenient tool that slips out of an executive's briefcase and is up and running in a flash. Data communications are painted as e relaxed and natural activity that take place without the annoying umbilical cords that are needed to connect one office device to another.

But the reality is very different. Laptop or notebook PCs are often extremely expensive devices which, incidentally, become an all-too-easy target for thieves.

Manufactnrere bave responded to user-expectations with standard colour screens, but this development drains batteries, leaving most portables with around four hours of useful battery life.

Batteries can be recharged, but the connection that makes this possible is another item to lug around. The portable business PC ceases to be a practical utility as more and more items are added. Modems have shrunk to become a coded instruction in a credit card-sized insert that slips into the chassis of the PC. But a physical link is still necessary.

Cost remains a buge impediment. People are unlikely to spend £2,000 or more of their own money on a piece of equipment that is almost exclusively intended for work. Thus, most portables are bought out of corporate bndgets, not private pockets.

When ICL launched the Edge range of high performance portables earlier this year it found that the target market of aggressive and technically adept professionals were not interested in paying for their own equipment. The laptop machines, sourced from Panasonic, were programmed with impressive communications facilities and came with heavy-duty technical support. But the company only sold 50 units to private individuals in three months. As a result ICL has re-focussed its PC product marketing to concentrate exclusively on corporate sales.

A demand for conveniant computing exists, but the big players in the IT industry may have missed out on an explosive market that rates simple factors such as battery life ahead of leading edge software facilities.

The UK company, Psion, bowever, has spent 11 years trying to find a winning formula for pocket-sized computers. Early models of the Psion Organiser were heavy, offered limited software and a matchbox-sized screen display. With the Series 3, a computer with the dimensions of a Filofax notebook, Psion has hit home.

Since 1991, it has sold 600,000 units. This machine retails at between £300 to £400, and delivered sales of £24.7m in the six months to June 1995. This represents a 48 per cent leap in demand, and marks a real shift in the marketplace.

Hewlett-Packard has a long pedigree in portable computers. The electronic organiser is maturing into a practical computer, and HP's 200 LX is about to acquire a connectivity pack linking it to Dos-based PCs.

Shann Hobbs, European product manager for HP's palmtop range, points out that, unlike the Psion 3 HP200 LX, users "don't have to buy fax and electronic mail functions. We build those in among 17 applications."

Dutch Railways have just bought 3,000 of these £299 machines. The London and Manchester Insurance Group has ordered £250,000 worth of 200LXs with enhanced memory for its salesforce.

Hobbs recognises that for many users laptops in the £2,000 to £4,000 range are not essential – "If you just want to stay in touch with an office and don't want to carry an extra bag for your PC and its connections, the 200 LX will do," he suggests.

Just launched: the powerful Gateway Solo Pentium multimedia notebook, claimed to be the first portable PC optimised for Microsoft Windows 95, the Solo line features active matrix screens, modular internal CD-Rom and floppy drives and the key features of a high-end desktop PC, plus infra-red file transfer capability. The Solo is available in both 75MHz and 90MHz processor platforms, in prices ranging from £2,499 to £3,499.

CASE STUDY Sales force appplication

A passion for palmtops

Reed Information Services sells industrial directories across Europe. Its 50-strong UK sales force are based in Sussex but travel the country to demonstrate Kompass and Kellys directories.

The company'e prodnct range has recently expanded to include CD-Rom titles, and sales manager Mark Brundrett says his colleagnes have a considerable amount of material to heave aronnd. When Reed decided to issne sales staff with a portable computer last year, the choice was influenced by the need for true portability.

"We wanted to give them something they could carry in their pockets and use to record information immediately after a meeting," he says.

The Psion 3a, which retails at £399, was Reed's choice. But Brundrett had reservations about how his staff would take to any kind of computers.

"I had some salesmen with a difficult attitude to PCs. I thought that one third of them would like it, one third would be reluctant users and the remaining third would resent this equipment," he recalls.

But Brundrett was pleased to be proved wrong. His sales team have taken to the palmtop computers with a passion.

"The move to the Psion 3a has been an enormous success. The machine is great fun and extremely useful," he adds.

Reed sales personnel download territory data listing customers by post codes. Revenue and targets are controlled via flow-cbarts contained in Psion's own spreadsheet software. Printer connections are maintained at regional offices, where sales staff print-off and fax-out weekly agendas.

Brundrett praises the simplicity of the print function

Continued on page 7

■ Small office/home office (SoHo) sector

Report by Jola Shillingford

Europe puts a different emphasis on SoHo trend

The lucrative US market for personal computer systems for the home and the small office is growing faster than in Europe

SoHo sounds like a trendy part of New York, but US marketeers have hijacked the word to mean small office/home office. They see SoHo as an exciting new market for low-cost personal computers (PCs).

In fact, in the last two to three years, the US SoHo market has boomed. But the market will not follow the same pattern in Europe, according to industry analyst Steve Brazier of Dataquest.

In the US, it is rapldly becoming the norm for middle class homes to use a PC for administrative tasks, such as completing their tax returns or printing cheques. However, Brazier says a number of factors make it more likely for Americans to buy home PCs than Europeans:

□ They tend to have bigger houses, making it easier for them to turn a spare room into a home-based office.

□ Americans, generally, are more wealthy – and PCs are cheaper in the US.

□ They are more computer literate.

□ They are more willing to spend their own money on PCs; in some parts of Europe there is resistance to having a PC (which represents work) at bome.

□ Every citizen has to complete a tax return; using software to produce it can help cut down on accountancy fees.

□ Many PCs are sold with fax/data modems, making it easier to use them for administrative tasks, or for on-line banking.

This helps to explain why there is less dramatic growth in the European market for home PCs. However, Chris Jones, a research associate at Dataqnest, expects a big increase in sales to the home market in western Europe in the fourth quarter (Q4) 1995. Home PC sales are now growing at around 25 per cent a year and are expected to make up a quarter of the total PC market in Q4.

"In the run up to Christmas, in the UK, prices will fall," says Jones. This will be partly due to competition from two German PC clone manufacturers, Escom and Vobis, who entered the UK market earlier this year. Escom, for example, sells Pentium-based PCs for under £1,000.

The small office (defined by Compaq as having two to five staff) and the home office (an individual or two, working from home, or just using a PC for personal finances/education) used to buy different PCs.

"But now that machines for the home have large hard disks and fast processors, small businesses are buying similar machines," says David Furniss, UK consumer marketing manager for Compaq. He says Compaq's £1,599 Pentium-based PC with CD-Rom drive, 8 megabytes of RAM (random access memory), stereo sound and 14,400 bits per second fax and data modem, suits both markets.

Home PCs must be easy to use

PCs for the bome market usually have a lot of software already installed. For example, Compaq home machines present the user with e totorial and easy interface wben they log on, as well as word processing and spreadsheet software, a CD-Rom based encyclopaedia, and initial subscription to the Compuserve electronic mail network.

The easy interface enables users to choose the environment they want to work in (for example, Windows) or use Launchpad to create a separate area of the computer for their children to work in.

Compaq's research showed that home PCs must be very easy to use, with something to appeal to different members of the family. Microsoft sells 60 software packages/CD-Rom titles aimed at this market, accounting for over 15 per cent of its sales.

Paul Tollet, the company's consumer business manager, says the bome market is the fastest growing part of Microsoft's business. Key drivers for growth are falling PC and software prices and more relevant titles for the home market. For example, Microsoft launches a UK version of its Encarta encyclopaedia in November.

Tollet also believes the small office market is growing, but bow fast be does not know –"one problem for the industry is that we don't know how much of our products are going to the small office," be says.

Multifunction machines

Makers of otber types of office product are also turning their attention to the SoHo market as sales of PCs drive sales of printers and multi-function machines for the desktop.

New products include tbe Hewlett-Packard (HP) OfficeJet which combines a fax machine, copier, printer and scanner (for simple graphics, logos or signatures) for £650. This type of desktop multi-function machine is aimed at executive secretaries, execntives wbo need local printing, faxing or scanning, and the SoHo market.

Other suppliers of desktop multi-functlon machines include Rank Xerox, Canon, Konica and Epson, which has just hought out the LapCat (providing faxing, scanning, personal photocopying, optical character recognition (OCR) and desktop file management) for £299.

Typically, the type of printing offered on desktop multi-function machines is inkjet, which is below laser quality although the gap is narrowing.

Dedicated inkjet printers are also selling well to the SoHo market because they are less expensive than laser printers, and much cheaper for colour. Suppliers include HP, Canon, Epson, Mannesmann Tally and others.

Both laser and inkjet printers are becoming smaller and more portable, because space is at a premium for home-office and mobile users. Sharp has launcbed its smallest laser printer measuring 299 by 291 by 185mm and Citizen Europe has a thermal transfer printer weighing only 500 grammes.

Modems (communications devices) are another fast growth area of the SoHo market as bome users join online services like Compuserve or the Internet. Creative Labs, the UK subsidiary of Creative Technology of Singapore, has launcbed a product, called Pbone Blaster, whicb it describes as an all-in-one telephone management eystem for the PC.

This costs £249 and includes a 28,800 bits per second modem for fax or data, a Sound Blaster (sound card for audio), speaker-pbone capabilities and voice mail. The idea behind the product is to equip home-based workers with the sorts of telecoms facilities they were used to in the office. The different functions are combined on a single card, which has to be installed in an expansion slot at the back of the PC.

Back in the office, the choice of multi-function machines for PC networks is increasing. Sharp bas just entered this field, already occupied by Rank Xerox, with a digital printer that can print and sort multiple copies, and staple and collate them. But with so many low-cost products for the bome, there'll soon be no need to go to the office.

□ More on multifunction machines: see next page.
□ The next issne of the FT-IT Review on December 6 will highlight new IT systems for the home and small office. See synopsis on page 24.

■ Multifunction devices for PCs

Report by Geoffrey Wheelwright in Vancouver

Cutting down on equipment clutter

Multifunction machines combine colour printing, copying, faxing and scanning facilities

Computer add-on manufacturers have launched a big effort to help clear the clutter from computer users' offices. No longer will the enterprising business person have to litter their workspace with a personal computer, fax machine, laser printer, document scanner and a photocopier.

Instead, leading manufacturers such as Hewlett-Packard Limited, Lexmark and Xerox Corporation have all launched advanced devices which are intended to handle all these jobs in a single unit that requires *only one plug-in to the* phone line, computer network, the power socket and the computer itself. And the latest of these reprographic devices are doing so in 'living colour'.

Hewlett-Packards new CopyJet and CopyJet M colour printer-copier systems, for example, claim to be *the* first products to integrate colour printing and copying in a lower-cost, network-ready unit. These new products – with prices that start at a street price of around $2,500 in the US – are designed to provide networked computer workgroups with a high-quality colour printer and a digital colour copier, in one product.

HP says the systems represent a new category of colour printer-copier products for the office that offers business users the convenience of a plain-paper colour copier and a colour printer. The company says that its research reveals that the concept of a combination colour printer-copier generates high appeal with potential buyers – twice as high as a stand-alone colour copier in the same class.

The company is aimed the CopyJet at low-volume users of outside colour copying centres as it is designed to enable affordable, in-house plain-paper colour copying. The company astimates that the CopyJet colour printer-copier copies at an average cost of 7 cents per plain-paper colour copy, (assuming 15 per cent ink coverage) and uses less expensive inkjet technology to accomplish this task.

In comparison, HP says a colour copy from an outside copy centre would cost anywhere from $1.00 to $1.50 per page.

The more expensive CopyJet M colour printer-copier comes standard with the enhanced PCL 5 printing language with colour, as well as support for the Adobe PostScript Level 2 printing language, additional memory and an HP JetDirect print-server card for sharing in Macintosh, networked and mixed computing environments.

"The HP CopyJat colour printer-copier is changing the rules of the game by combining HP's proven success in colour printing and scanning to create a new category of products with greater appeal than stand-alone copiers," says Vyomesh Joshi, general manager of HP's San Diego Imaging Operation.

"The CopyJet colour printer-copier breaks new ground with its combined colour copying and printing functionality and its affordable price."

HP would find these claims *vigorously challenged* by *Lexmark* in the US, which released its own colour printer/fax/copier/scanner at a significantly lower price. Its product range, the Medley, comes with a starting price tag of $1,000 in the US and is available in three different models designed for the burgeoning small office-home office (SoHo) and home-user market, *(see report, page four).*

In addition to providing colour-capable printing, it hasthe ability to fax documents at high speed – running at 14.4 Kbps fax speed, rather than the more common 9.6 Kbps – PC image-scanning at 300 dpi quality, PC fax software standard, a convsnience copy mode, and a paper capacity of 150 sheets.

It is based on Lexmark's ExecJet IIc colour inkjet print engine and prints at three pages-per-minute (ppm) in monochrome draft mode and 2.5 to 7 minutes per page in quality color mode. Lexmark says that high-quality graphics can be reproduced in a range of more than 16m colours – and in 256 levels of grey-scale in monochrome.

Meanwhile, at the top end of the market are such products auch as the Xerox Regal 5790 Colour Copier/Printer System, which *is designed as a workhorse* document management system for larger companies and boasts the ability to support volumes up to 30,000 pages a month.

Prices for this system start at $44,500, but Xerox promises the performance is worth this outlay when a significant number *of* users are sharing *the* device. The advanced system can, for example, produce first copies or prints in 18 seconds for colour and 7.9 seconds for black-and-white.

Along with this high-speed colour output, Xerox says the Regal Colour Copier/Printer System produces black and white pages at 36 ppm and is capable of producing high-quality manual duplex copies, as well as supporting a wide range of throughput – including 90 lb. index, 80 lb. coated stock and transfer material on paper ranging from 8½ by 11 ins. to 11 by 17 ins.

The real question with all these devices, however, is whether they are more than the sum of their parts – particularly if you are a home office user, the cost of buying a multifunction product like those from either Xerox or HP may well be more than buying each of those components to carry out these functions individually.

And it also means that users are much *more reliant on a* single system. If it hreak down, you cannot send faxes, receive faxes, do any copying or printont documents. Some users therefore feel they cannot invest so much trust in a single product. To get round this problem, multifunction equipment auppliers are going to have to make potential users feel comfortable with the technology and all it offers – and *that* is likely to taka some time.

■ Office imaging

Report by Julie Harnett

Marks on paper are still big businesss

Although digital copying is a big pre-occupation in the research labs, copier-makers have not forgotten the real world of analogue systems

Integrated copying: the Sharp AR-5040 digital machine, linked to a *computer for printing straight from a disk*

The frenetic activity on the takeovers and mergers front in the photocopier industry during the past 12 months underlines the fact that making marks on paper is still a big money-making business *for* dealers and distributors, *as well as manufacturers.*

In the UK alone, copier sales rose 10 per cent to 133,000 units in 1994 generating revenues of £516m, with 1995 heading for a growth rate of around 8 per cent, according to Roger Riselay of market research company InfoQuest. However, if one adds in value-added services such as installation and service, total revenues rose to £1.59bn – that is 37 per cent of the UK'a entire £4.3bn 'office imaging' industry, including printers and fax. The forecast is that, by the millennium, the office imaging market will be worth £6.8bn, £1.77bn generated by photocopiers.

As to the type of machines people are buying, last year saw a surge in the personal copier market, with units sales rising to around 25,300 units largely as a result of mora manufacturers nsing retail channels to target the small office, bome office (SoH0) buyer, says Jacqueline Hendriks, market analyst at Dataqnest European document management group.

The forecast is that increased competition from low-end printers and more affordable multifunction machines will, over time, erode the low end copler market, including 12-20 copies per minute (cpm) machines which now account for 44.5 per cent of sales (65,500 units).

The growth areas over the next four years will be in the 31-plus cpm copier market, with the 70-90cpm segment seeing most activity in terms of product *development* and the number of players, says Dataquest.

New developments

Indaed, although digital copying is a main pre-occupation in the research labs, manufacturers have not forgotten the real world of analogue copying and are responding to user demands for increased productivity coupled with greater ease of use.

For example, Konica has entered the digital arena with the *7050*, but *has also* developed the 5370 copier, a 70cpm analogue copier offering enhanced prodnctivity via *'Cascade Sort'*, a development which allows the utilisation of sorter bins to produce up to 2,000 copies of one original in a single run; and a 'stackless' automatic dnplex unit which provides faster double-sided copying.

Optimum productivity was also the focus of attention in the development of the Panasonic FP-7160 which cleans itself between services to minimise downtime. *It* also benefits from isolated component design which means that, should a problem occur in one *sub-system during copying*, it will not affect other functions. Even the toner can be replenished while the copier is in operation.

With Jacqueline Hendriks predicting that manufacturers will soon start selling Segment Ona (12-20cpm) machinea through retail channels, it is interesting to note the incorporation of features on higher spead machines previously only *available* on 'baby' personal copiers. An example is instant warm-up, now available on the new 12cpm NP6012 from Canon. It also incorporates a 'revolutionary' rapid fusing system giving overall energy savings of up to 59 per cent.

Analogue systems

Tha main topics of discussion though, were the developments in, but slow take-up of, digital copying technology; and promises of exciting things to come on the multifunction and colour front.

Many recent developments, however, underline the point that digital technology does not mark the end of an era for conventional pbotocopylng; but rather a continuing evolution towards machines that are capable of performing basic as well as ever more sophisticated taske electronically, rather than mechanically.

A case in point is the Océ *3045* copier which, though described as an analogue machine, bridges the technology gap in that its engine will be used in the next generation of networkable digital copiers, the first of which (the Océ 3165), is due to be launched in 1996.

The main advance to come in technology is the scanning process and memory capabilities which offers the banefit of 'scan one print many' with the ability to collate and sort without the need for an external eorter. An innovation worth noting is 'Image Logic' technology which automatically detects weak text, narrow lines, shadings and photos on *originals*, automatically selecting the appropriate processing for optimal copy quality rivalling that of offset.

Tha *new* class of hybrid analogue/digital copler also includes the new Kodak Image-Source 110 and 85, both of which are manufactured in Europe and bring what Kodak calls 'high definition' technology to office document applications.

Along with Océ, Rank Xerox, Ricoh and otbers, Kodak believes that the change to oetworked connectable, digital copying is inevitable. Indeed, Kodak European researcb shows that, in five years, only 42 per cent of firms will be using *analogue* copiers, compared to 58 per cent using digital. Even so, only a small percantage of businesses today have the facility to pass all their documents for production on disk to their print rooms or external print suppliers.

It may well be thet purchasers enter the digital era more by default than by design – simply because, at the end of the day, there will no longer be

Continued on page 8

Majority of businesses opt for client/server technology

More than 43 per cent of companies in tha UK have already implemented client/server computing, with a further 35 per cent now considering *this technology, says a* new report.

A survey among 750 information technology managers by the Tate Bramald Consultancy reveals that 58 per cent of companies are considering a move to client/server computing within the next two years.*

Findings

"This figure reflects the international findings of the Gartner research group, which expects two-thirds of all systems to be client/server-based by 1997," comments Ms Ziba Leckie, for the Client/Server World Exhibition and Conference, which commissioned the report. The event is due to take place at London's Olympia from November 28 to 30.

The cost of client/server was regarded a key issne, with 56 per cent considering this be the main reason for rejecting the technology. Lack of client/server skills (24 per cent), both in the company and the market, and the complexity of implementation were ranked sec*ond and third, respectively.*

Users identified the main benefits of the technology to be improved access to data (29 per cent), flexibility (22 per cent) and the use of graphical user interfaces (11 per cent). Many companies listed advantages such as distribnted processing and wider user-empowerment.

The finance sector was seen as the area with the highest proportion of client/server systems, (27 per cent). The most popular application areas were database (29 per cent), spreadsheets (26 per cent) and mail (22 per cent). Among the respondents, 69 per cent said the decision to move to client/server was taken as part of an IT corporate strategy, mainly set at board level.

**More details are available from the Tate Bramald Consultancy, Richmond, Surrey, telephone 44 (0)181 332 2417; and Interactive Exhibitions on 44 (0)181 541 5040.*

■ Network management

Report by Philip Manchester

Battle to keep track of systems

With larger companies now using tens of thousands of PCs, managing the system can become a nightmare

Although PCs and local area networks have been common business tools for more than a decade, it is only recently that it was thought necessary to bring in formal management techniques. US researchers Gartner Group noted in a 1993 study that the cost of PC ownership had grown dramatically since the mid-1980s. In 1987 the five-year cost of ownership was $19,000. By 1993, it had reached $40,000.

Gartner Group also found that corporate PC networks had also grown from an average of 600 PCs per company in 1987 to nearly 2,350 in 1993. It concluded that the increased complexity of PC networks was a major contributor to the increased cost of ownership.

A study of UK companies carried out this summer by the leading chip builder, Intel, showed that the average number of PCs in a sample of 46 large companies was 4000 and 41 per cent had more than 1,000 PCs. The biggest complaint from network administrators was lack of resources – including tools to manage the network. *(see table)*.

It seems odd, therefore, that it is only in the last two or three years that manufacturers and software vendors have caught on to the fact that networks of PCs need managing. There are several explanations for this apparent example of 'locking the stable door after the horse has bolted'.

Mr Jeff Alsford, UK technical director of networking specialist Bay Networks, says the networking infrastructure has become more complicated – "as we move into switched networks, with many components, and companies trying out ideas such as virtual networks, the physical network doesn't look like the real network anymore. Yon need the tools to keep track of what is happening".

Networks are also complicated by their size. Mr Pierre Schmit, international vice president of Tivoli Systems, says: "Although the number of PCs a company grows linearly, tha problem of managing the network grows exponentially. People have only recognised the prohlem now thet networks have grown so large."

The rapid growth of Tivoli, a systems and network management specialist based in Austin Texas, illustrates the recent phenomenon of managing networks – "we atarted from scratch only five years ago. We now employ 300 peopla and aerve a worldwide customer base. We now have so much business we are turning it away," says Mr Schmit.

The absence of systems and network management can be hindrance to growth, adds – "we are, for example, working with an organisation in Geneva which wants to deploy 3,000 new PCs. Senior management said they could not install them until they had adequate systems management facilities in place."

Tivoli is one among many companies which have seen an opportunity to exploit the growing need for tools to manage natworks and, indeed, entire systems. All of the main manufacturers – IBM, DEC, Hewlett Packard, Sun Microsystems, in particular – have announced systems and natwork management strategies and products in the last couple of years.

Network management also figured high on the agenda Microsoft's summer announcement of the Windows 95 operating system. New features were included to make it easier to manage PCs attached to local area networks (Lans). Increasingly, bowever, tbe emphasis from suppliers is on total systems management rather than basic management of the network.

Mr Schmit of Tivoli is keen to point out the difference: "All large corporations now have thousands – even tens of thousands – of PCs. In the background they have hundreds of servers – mainly hased on Unix and, beyond that, mainframe systems. It is a nightmare to manage all of this – checking log-in authorisation, monitoring failures and supporting a vast community of users," Mr Schmit explains.

He is also critical of what he aeas as 'proprietary' approaches to the problem and advocates industry standards as a way to provide a true 'open' approach: "Microsoft's SMS, Sun's Solstice and IBM's SystemView are fine within their own environments. But customers want open world and we can work with any system. Although IBM and the rest can work througb standards like the Simple Network Management Protocol (SNMP) it is a very crude way of communicating."

New standards are emerging whicb will belp resolve the problem of joining network and computers from different manufacturers. Tivoli uses the Object Management Group's Corba standard for communication between systems software objects.

Mr Alsford of Bay Networks says that RMON2, a new remote monitoring standard, will also help at the low levels of communication: "RMON is a well-defined standard which lets you access everything on the network. It started out as a way to monitor packet traffic on a Lan. But now you are able to track from desktop to desktop and it gives yon access to the client/server world."

> A complete overview of complex systems is essential

He also acknowledges the importance of taking a complete view of the system – "it is important to give the whole system view. Some people will be interested in the Lan traffic, some will be interested in server usage and some in Lan traffic.

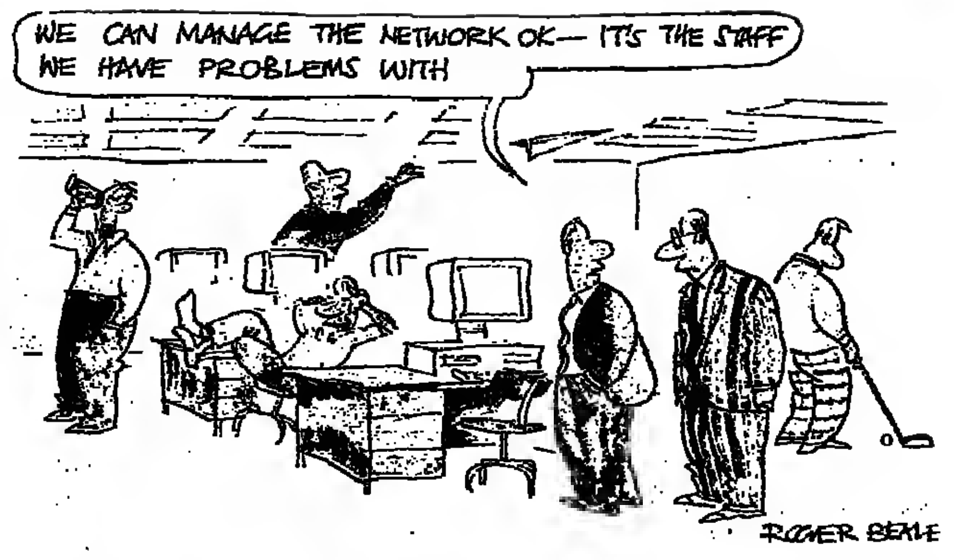
"But the important thing is to give a simple picture of what is going on. Bandwidth is still limlted and network administrators want to se who is talking to and bow much resource they are using. Its all about good management information," he says.

Bay Networks also gives network administrators tools to simulate network behaviour – thus making it easier to plan expansion and the possible impact on the network.

"If you want to make changes to your network – then you need to be able to run a 'what-if' simulation to see what will happen. You can see if you need a more powerful server or faster communications before you make a purchasing decision."

Clearly, computer networks are destined to become more complicated than they already are and the disciplines of systems and network management will become an essential part of every corporate skill base. It is, therefore, interesting that, while Intel's survey of UK companies found that 75 per cent of companies were using network management tools, a quarter are not. This will most certainly change in the next year.

Networks: from PC lans to the Internet: see page 4



Profile of Lan managers and their companies
Number of PCs in organisations
in UK Local Area Network Manager Survey

Number of personal computers	Total (Base-size of survey: 146). PER CENT	Small company: 1-500 (56*) PER CENT	Medium company: 501-2,000 (44*) PER CENT	Large company: (2,001+) (46*) PER CENT
Up to 500 PCs	33	67	15	11
500-1,000 PCs	10	4	16	11
1,000 or more PCs	18	7	7	41
Can't say	39	37	35	43
Average number of PCs in organisation	1,470	275	430	4,000

More than half the managers taking part in the UK Lan Network Manager Survey *for Intel, the world's largest semiconductor manufacturer, by the Gabriel Ashworth* Research Consultancy were said to be "frustrated with the limitation of their network." More than 80 per cent claimed that their network was in need of some form of improvement, but development budgets were often inadequate. The worst aspects of managers' jobs included dealing with angry users and total system failure at the busiest times.

**Indicates base-size. Source: Gabriel Ashworth Consultancy, London, tel +44 171 700 2277.*

■ Data storage

By Jola Shillingford

PC storage demands spiral out of control

Although the cost of data storage is falling, PC users' requirements are soaring

Personal computer users are buying twice as much storage every two years, according to researchers at the Gartner Group. But users' storage requirements are doubling every year. This means that lack of storage could soon be one of the biggest issues for personal computer (PC) users.

Demand for storage is increasing because:

☐ Operating systems, such as Windows '95, are becoming larger.

☐ Software packages often take up more than 20 megabytes of space.

☐ Users are filing more storage-intensive data – for example, sound and video.

☐ Users are filing electronic mail and information from on-line services.

☐ Organisations are storing more data about their customers.

☐ The cost of storage is falling 20-30 per cent year on year, says the Gartner group. This trend encourages users to store more – "before long, businesses are going to have to work out where they locate the information they store," says Peter Sondergaard, an analyst at Gartner. He believes there is a role for the sort of storage devices available in tha mainframe and mid-range computer market.

At present, hard disks (as sold with most PCs) are the most popular solution for PC storage. This is because they possess a number of advantages including low cost, a wide choice of suppliers, and fast data-retrieval speeds.

They have taken over from floppy disks as the primary means of data storage, with floppies being used to transfer data to another computer – for example, through the post – or from an office PC to a portable/home computer.

The floppy disk's original role – as a form of storage – could also be under threat from another direction. "Rewritable compact discs (known as CD-R) could become the floppy disk of the 21st century," predicts Sondergaard.

Prices for CD-R drivea are still too high for the mass market, where CD drives that play only non-rewritahle CDs are becoming standard. But the cost of CD-R drives is falling. Hewlett-Packard has recently introduced one costing £829 for the drive and the software needed to create CDs.

At this level, CD-R technology warrants serious consideration hy businesses. A single drive can be used, for example, to create multimedia sales presentations that can be personalised for individual customers. Discs created using a CD-R drive can be played in any multimedia PC or portable with a standard CD-Rom (for compact disc read-only memory) drive.

Tbe advantage of storing data on compact discs (which look just like music CDs) is that the cost per megabyte is low. Typically, they can store 600-1,000 megabytes of information, bnt data retrieval is slower than on hard disks.

Other forms of PC storage include credit-card sized PCMCIA (Personal Computer Memory Card Association) hard disks which plug into expansion slots on most portable PCs and some desktop PCs. PCMCIA disks are a very energy-efficient form of storage.


Today's PC-users are filing more storage-intensive data

Tape drives are popular for data archiving and back-up, where fast access to information is not needed. Tape, such as digital audio tape (DAT) is cheaper than Raid (redundant arrays of inexpensive disks) technology.

Tape back-up

HP has just introduced a tape back-up system designed for PC users that are comfortable with PC software, but not with opening up tha PC to inatall equipment. Costing £253, this unit plugs into a PC's printer port and can backup data at 9.5 megabytes a minute, storing up to 400 megabytes (or 800 megabytes if data is compressed) on a single Travan mini-cartridge, costing £24.

Travan is a new kind of tape back-up system, which is slightly larger and squeezes more information on to quarter-inch tape. It is patented by 3M, but sold under licence by a range of tape-drive makers inclnding HP, Conner and Iomega. Sony and 3M, among others, make the minicartridges. Mark Nicholson, product manager data cartridges at 3M, says: "Users previously had to choose between high capacity, expensive hard disks and low- capacity inexpensive tape. Now they can get high capacity and low cost."

Before Christmas, a version of the Travan standard should be available which will store four gigabytes of uncompressed data. 3M is also developing PC storage management software for tape in conjunction with a US company.

Raid technology is popular for larger systems and networks. It cleverly combines low-cost PC hard disks with some techniques and peripherals common to midrange and mainframe computing environments. Hard disks are essentially stacked together so that several can be accessed simultaneously for extra speed.

Software solution

But the ideal solution for PC storage and back-up may lie in software rather than hardware. In the mainframe and midrange arena, large companies can bny software that belps them cut down on storage costs – which can amount to millions of pounds a year.

Derek Masters, manager, Northern Europe, for US-based Sterling Software, says in the last few montbs three large European banks bave spent half a million pounds each on software that automates storage management.

The software does not just back-up data in case of computer failure, data loss or other disaster: it provides intelligent, incremental back-up. It will only backup data which has changed since yesterday. And it is used in conjunction with automatic tape libraries (from companies auch as IBM and Storagetek) based on Raid technology.

The software also works out which files are accessed so seldom they can be put on to a more low-cost form of storage – "people tend to buy storage before they need it," says Masters. "So they often operate at only 60 per cent utilisation. With storage management software, they can run at 90 per cent and still feel secure."

There are a number of suppliers of storage management software for large systems, but Masters says "no-ona has a good enough solution for PC back-up and few IT managers are happy with PC storage and backup in their organisations."

Sondergaard believes that: "PC users need software tools that start to deal with the 'info-glut'. They need software-based personal assistants that get to know their preferences and help them decide where to find information and when to archive it."

Palmtops prove their worth

Continued from page 5

with this system – "printing-off data is a delight. You scroll through o menu until you find the appropriate printer and then push the print key."

His prior experiences struggling to make personal computers commnnicate witb printers are all too common. If a portable computer is going to be used every day, and not left languisbing in its owner's briefcase, it must not demand too much attention in order to function.

The palmtop computers that grew out of personal organisers score bighly on battery life. With only a mono screen needing power the Psion 3a runs off standard, cbeap and easily available PP batteries. Mr Brundrett has notched up 35 hours of use with one set of batteries. His only criticism of the system is the relatively small screen size, but this is inevitable in such a compact device.

Theft is a growing concern for corporate users of lightweight computers. Replacing stolen equipment is becoming a burden for companies that bave seen PCs repeatedly snatched from offices and cars. The comparatively low cost of the Pslnn 3a means that replacement is not prohibitively expensive.

Organisations such as Reed have learnt to apply appropriate levels of technology, matching a computer system to the real needs and interests of employees. Palmtop computers may not please the technology purist, but they are emerging as a serious business tool.


Mark Brundrett: using the Psion 3a has been 'an enormous success'

■ Data warehousing

Report by Michael Dempsey

New ways to 'mine' hidden data wealth

Data warehousing helps companies to explore their customer-bases

For the past decade, many retailing groups have suffered from a nagging feeling that they were sitting on a goldmine that could not be exploited.

Vital informatioo about the customer-base has long existed in the form of recorded transactions, but those transactions were piled high in a computer system that could not respood to comples queries.

Marketing revelatioos emerge through unusual connections, but the human imagination is a more practical and creative facility than expensive computer systems tbat can only trawl through information on the basis of rigid technical parameters.

As ever, technology has beeo slow to deliver on the demands of business. The much-hyped world of relational databases promised to give users control over and access to vast 'reservoirs' of data. But a ferocious marketing campaign throughout the late 1980s only served to boost the profits of companies selling expensive software programs. The goal of squeezing information out of raw data remained largely unfulfilled.

The notion of a warehouse cootaining data has emerged recently. Products stacked in warehouses can be accessed via fork-lift trucks, so IT professionals like to use this image to coovey their latest precious concept of 'warehouses' of informatioo . The experience of commercial users is that it is much easier to find their way around a small building than a vast warehouse. And the machines that make that journey possible become cheaper with less ambitious projects.

Dilemma

Tom Mays, senior vice president of the computer arm of AT&T, Global Information Systems, recently addressed the issue of data warehousing at a conference in Chicago. He identified the dilemma of organisations faced with a wealth of data, but a lack of information.

His answer was a new range of database 'engines' designed for data warehousing, but built for realistic budgets. The WorldMark series of computers rely on parallel installations of Pentium processors, the chip at the heart of many PC workstations, to churn through formidable quantities of data. Prices start at around $50,000.

A user can reconfigure this system, putting more and more power in place until computer costs reach the million dollar mark. WorldMark machines will run both standard commercial databases and the specialist programs written for digging away at corporate data. It is this activity, usually referred to as data mining, that yields the real results.

TransQuest, a joint data-processing venture operated by Delta Airlines and AT&T, is one of the first WorldMark customers. William Belew, TransQuest president, acknowledges that data mining has had a direct impact on the airline's operations – "we've saved $100m a year by data mining exercises," he says.

TranQuest's trick was to employ a dedicated program to match aircraft and crew on its routes.

Getting crew in the rigbt place at the right time maximises the use of airliners and saves costly equipment from sitting around on the tarmac. The arrival of affordable hardware gave it the vehicle for a profitable programming venture.

Valuable discoveries

How IT allows a big US retailer to improve services

Food Lion of the US is a North Carolina-based supermarket chain with more than 1,000 stores across 14 states, with a turnover of more than $7.9bn.

Terry Morgan directs a management information systems department with an annual budget of $20m. But despite this formidable investment in technology, Morgan is not divorced from the corporate motto of "extra-low prices and more."

Food Lion has seen its share of aggressive pricing and has honed down its logistics in every way possible. For Morgan, the challenge has been to identify new areas for change – "in the last two years, we've decided to evolve the business because the competition started copying us."

Food Lion turned its attention to the volume of business passing through its stores. Morgan says that "in the past, we had 9m transactions every week, but we didn't know how many customers this represented."

Getting to the beart of product relationships, the network of arcane allegiances that dictate the contents of an individual consumer's shopping basket, depends on better ways of identifying customers and their purchasing patterns.

For Morgan, the data warehousing exercise consists of two aspects. He wants to establish "the dynamics of each shopper and the dynamics of product offerings". Put simply, this is the process by which a shrewd retailer – for example – moves baking potatoes out of the fresh produce section into the meat aisla because they fit well with potential purchases of steak.

Data warehousing is not another cost-saving operation, says Morgan. For Food Lion, it is a way of adding to the service available to consumers – "we want to improve our own understanding of the customer, so we can offer him or her more," adds Morgan.

He uses AT&T hardware, the Informix commercial database and two data mining programs to pin down the demographics of his customer-base and the differing appeals of prodnct categories. For software tools at the 'sharp end', the company uses programs from Impact from Kelly and Associates, and Clear Access, from Micro Strategies.

Food Lion is discovering which goods appeal to what segments of the customer-base. This has had a profound affect oo the way Food Lion perceives itself. Morgan characterises Food Lion's former existence as "a cookie-cutter operator" – a company that created every store according to tha same blueprint, but its strong *regional base soon* proved a handicap – "we were from North Carolina – and what worked *there*, didn't succeed in Texas," he says. The company had fallen into the trap of looking at its activities in aggregate terms, lumping all food produce into the one marketing category.

With an early release of the WorldMark system, Morgan has begun to exploit data as a means of supporting profound marketing decisions – "we used to think of each outlet as just another store, selling against other food retailers. Now we've expanded our definition of the competition, we are selling against the decision to 'eat out'. That means restaurants are a retail competitor".

Data warehousing can be an educational experience. The technical achievement was available a decade ago, but only at a prohibitive price. Now, Morgan sums up the contemporary appeal: "You can get into data warehousing and data mining for a few hundred thousand dollars and use anybody's database offering."

Michael Dempsey

■ Database management

No longer a simple issue

Questions on security and access are increasingly important, writes Philip Manchester

Managing data used to be easy. It was so easy that special database management software was unnecessary. It was also easy because data was only numbers and codes – customer account codes, outstanding balances, *hourly wage rates and* the like. What made it easiest of all was the simple fact that tha only people who needed to get at data were *professional* programmers who understood the technical complexities of disk storage.

Now this has all changed. In the 1990s, evaryone wants access to data – from the prospective shopper interrogating a *point-of-information terminal* for product specifications and prices to a senior executive looking for a consolidated profit and *loss figure. Further*more, data has grown more complex. It is no longer only numbers and codes; it can be text, *graphics* – even *video* clips. It can be stored almost anywhare – from the local hard disk on a desktop PC to a *remote server at the other end* of the information superhighway.

Tha result is that special database management software has become unavoidable. Even skilled programmers would find it difficult to keep track of the many different types of data spread across many different computer systems.

The main change that has taken place is a move from the established 'relational' database approach which uses a two-dimensional table to display data to an object-based approach.

"The relational database deals well with the transactional data such as orders and invoices. But it doesn't handle the complex data that people now want such as multimedia and video," says Mr Keith Dixon, market development *director* at *Illustra Information* Technologies.

As one of the new wave of database software companies, *Illustra has recognised* that companies want to he able to combine their transaction data with new forms.

"Users need to be able to issue complex queries against their data including their multimedia assets. If you take the retail industry, for example, we have been working on a project which combines maps and traditional data so you can ask questions like: 'Show me the stores that sell my products within a hundred miles of my depot?'

"If you tried to do this with a traditional approach you would need a complex geographical information system and an expensive relational database," Mr Dixon explains.

Mr Jim Beagle, European *vice president of rival object* database company Object Design, also sees flaws in the established relational database approach: "The volume and complexity of data we are trying to store and access today is beyond the scope of relational database software. It is great for structured data such as spreadsheets.

"But if you look at the finance sector where they are dealing with things like derivativas trading and complex relationships between stock and bonds, it is too complicated for relational database. Object-oriented databases let you store and access this type of complex data in its natural form."

He does not see object databases replacing the traditional relational database in the 'back office'. But he sees the 'front end' that users see on their desktop becoming increasingly object-oriented and the tools for accessing and manipulating data easier to use – "the key is to show the user an application and get rid of the barrier between database management and applications".

Other software suppliers are taking this idea even further – "users are faced with a growing mountain of data which they cannot understand. Our approach is to show it in a form which relates to their *business*. Yon have to give tham a front-end wblcb focusses on the business terminology," says Mr John Powell, UK managing director of Businese Objects. "They need a nice user-friendly interface which lets them drill down into the data and get better value out of it."

But merely offering users better ways to access complex data is only half the story, he adds. "We must also give the IT department a way to control the data – making sure access is authorised, security procedures are in place and data is clean."

Issues such as security and access become even more important where companies are accessing outside sources of data. As more and more *businesses hook* into the information superhighway and make use of remote databases, they ara faced with even greater complexity. *This has* spawned a whole new set of tools called 'browsers' which let users navigate through many different databases.

Netscape, which gives users an easy way to access the World Wide Web (WWW) service on the Internet, shares mnch in common with the modern database 'front end' tools.

"The front end of database is definitely changing and browsers are an important step forward. With products like Netscape and the WWW we are seeing an entirely new way for companies to distribute information. *Some large companies* now have internal services using browsing *software*," says Mr Dixon of Illustra.

"The *underlying approach* to Netscape is a much more natural way of finding your way around complex data and we expect to see things moving more in this direction," says Mr Beagle of Object Design.

Browsing software such as Netscape and Sun Microsystems' Hot Java point the way forward to an entirely new way to get at data in all its forms.

Mr Scott McNeely, CEO of Sun Microsystems, says that this could change the nature of computing on the desktop. He goes as far as to say that the desktop operating system and its associated software could disappear in a *few years time*: "The whole thing has got out of control and the features in desktop software are far *beyond* what we need.

"Personal computers have become personal activity generators, rather than prodnctivity tools. Most people only want three things: to communicate with e-mail, to view information and to run their applications."

Sun's Hot Java works on the principle that the ooda needed to view and manipulate data is stored with the data itself. It is only 'downloaded' to the desktop when it is needed. If this approach gains wide support from the supplier industry – as seems likely – it will precipitate yet another improvement in data access with most of the complexity hidden from the user's view. Now *that* would be progress.

■ Groupware:

Report by Philip Manchester

Better route to team effectiveness

Whoever invented the term 'groupware' has a lot to answer for, even in an industry of ever-changing marketing fads

The term 'groupware' grew up with the Lotus Notes software package, now owned by IBM. Lotus Notes enables people across a department, a country or time zones to work together on electronically stored documents and contribute to *on-line bulletin boards, all at times* which suit the individuals involved.

Today, groupware is used *to* encompass various combinations of products which belp people work together. These include Lotus Notes and similar producls, plus electronic mail, work flow control systems, document image filing systems and sometimes video-conferencing and voice mail.

But discussions of precise definitions are academic to successful users of any, or all, of these groupware components. As James Hall, head of Andersen Consulting in the UK, explains: "Groupware enables us to share common information quickly across, potentially 30,000 people world-wide. Every consultant can be armed with the totality of information in the practice and can stand on the shoulders of 30,000 other people. This is impossible to achieve in any other way."

Andersen has provided access to Notes to around 10,000 people in the last three years and is expanding this access to all staff. They can link to the Andersen network *from* their offices, homes and portable personal computers.

"If people are having a international video-conference, they'll probably all link individually to Lotus Notes to look at the same document," says Mr Hall.

Andersen moved from paper distribution and libraries to groupware because of growth of both the practice and tha amount of information that had to be shared, plus the speed at which the information changed.

It now has four main uses. There is an inventory of client projects which can be searched for examples of uses of a specific technology or method. There are databases of best practice in different industries and Andersen services. Staff can look up a Andersen's standard methods and techniques, for example in designing business tasks or project management. In addition, individual project teams can set up their own bulletin boards to discuss their work.

News database

Other uses include a news database, instantly brought up to date with items of news about the firm or relevant to its business.

Mr Hall points out that some of these activities could not be done at all by paper methods and none could be done as effectively. Whole volumes of manuals and routine publications have simply been eliminated, saving time, paper and distribution costs: the emphasis now is on enabling people to find information easily on-line when they need it.

Training has been reduced because help in the form of methods, techniques, best practice and experience with other clients is now available to professional staff on-line.

Mr Hall is "coovinced that proposals have improved immeasurably in quality and speed of response," again *because of access to best practice* and experience. All these benefits ara based on shared information, which raises some key issues for organisa*tions considering groupware*.

"Groupware needs an organisation culture which promotes sharing and is non-hierarchical or has few layers," *Mr Hall says*. "Groupware cannot be a substitute for that culture: it cannot bring the culture about.

"It also needs certain disciplines: people must see it as part of their joh to maintain information and record details of their projects. This is increasingly becoming part of the joh here anyway, part of the process of managing a client engagement – and rewards are linked to it.

"At tha same time, peopla must not be allowed to become introspective and spend all their time posting messages to hulletin boards and not doing business. Even so, a little 'surfing' of the system now and then can be useful for learning new things, as long as it is goal-oriented."

Andersen's internal network means the system can be extended *to* more and more users without the firm needing to change the way it distributes information. The change from *paper to Lotus Notes was the big step*: after that, it is just a case of adding personal computers, disc storage and network equipment, rather than rethinking the whola information sharing philosophy.

"It's probably no longer possible to quantify the benefits or costs," Mr Hall suggests. "But it's now inconceivable that we could withdraw the system and survive as an organisation."

Copier market hots up

New systems can make everyone an editor, printer, publisher and distributor

Cootinued from page 6

any alternative. A survey com*missioned* by *Toshiba and con*ducted by Research Solutions Consultancy, shows 'a definite lack of knowledge and education which could hinder positive progress'. Mark Garius, assistant general manager (marketing) of the Toshiba Copier/Fax division, comments: "The concept of digital copiers is certainly less well understood by the market than other digital equipment, such as fax and printers, witb nearly half the sample unaware that digital copying was even available.

"We found tbat corporate users are uncomfortable with the concept of combining digital copying with fax and printing and with the idea network access."

Others might argue that only when there is no price premium – that is, when digital technology is available at analogue price levels and extra functions are added at no extra cost – will purcbasers not stop to question the transition.

There is the additional point that, once digital technology is *embraced, other* factors enter the purchasing decision that involve managers concerned with computer services, networks and communications.

Picking up on this point, David Naylor, director of marketing, Sharp Electronics in the *UK*, argues that one reason wby digital, colour and multifunction copiers have yet to make any real impact on the market is because these devices ore 'a sophisticated buy', often impacting an organisation's IT strategy. Sales cycles are therefore longer. Secondly, they ore 'bucking the trend' of copiers at the general office level where companies want copiers that are easy-to-use and easily customised, using function-specific modules. Nevertheless, the forecast is that the multifunction (copier-printer-fax) market will grow at an average compound rate of 167.8 per cent from 1994-1999, with the low-end growing at an exceptional 472.2 per cent.

The question arises, then, as to whicb suppliers will win the *game plan – those wbo speci*alise in computer printing and add copying and faxing as part of their solution; or those whose roots are in document reprographics and add variable data printing and electronic distribution.

Tom *Primett*, *UK* copier product manager for Ricob, which claims 38 per cent of the copier-based multifunctional machine market, agrees about pricing: "Early next year, Ricoh will introdnce the first of a range of high quality, mid-to-high volume digital copiers at analogue costs, the first of which will be a 40cpm unit. Later developments will include both personal and networkable copier-fax-printers."

What is likely to have a big impact on pricing levels and, thus, speed of uptake, is competition from printers and fax suppliers. Earlier this year, QMS and Tektronix added copying facilities to printers; at the personal level, Hewlett Packard has unveiled the CopyJet for February delivery at a target retail price of £2,139. It could be a winner in the small business market because, unlike today's crop of multifunction fax-printers, the flatbed scanning surface means users can copy from books and 3D objecta, as well as flat sheets, *without damage*.

Big debate

The future of digital colour copying for business applications has been the subject of great debate for some years, but the past 12 mooths *has* seen a much greater acceptance by purchasers of the potential cost savings of bringing short-run colour and pre-press work in-house rather tban using that external printshops. According to Dataquest, *Canon still rules* the roost in the UK colour copier market with a 69 per cent share, followed by Rank Xerox (11 per cent), Kodak (6 per cent) and Ricoh (5 per cent), with 96 per cent of all colour copier placements being digital, but only a third fitted with a computer interface.

There are no doubt about the growth of computer connected colour copying-printed at the high end, bowever.

Electronics for Imaging (EFI), the market leader in the *supply of the technology (Fiery* Colour Server) that transforms digital colour copiers (from *Canon, Kodak, Minolta, Océ, Rank Xerox and Ricoh)* into high-speed colour printers. With 25,000 Fiery Colour Servers installed worldwide producing an estimated 125m colour pages every month, EFI has been able to announce a 48 per cent increase in revenue to $133.7m for the nine months to 30 September 1995 and an 84 per cent jump in net income to $25.2m compared witb tbe same period *last* year. But increased speed must be the key to success in this market. It is an aspect that Xerox has addressed with the development of the Regal 5790 colour copier/printer which can produce nine-colour pages per minute, 36cpm in black and white.

Océ is also gearing up to enter the high-quality digital market in 1996 with an even faster 23cpm full-colour copy speed.

Richard Baker, manager of Office Network Copiers at Rank Xerox (UK), comments: "Media guru Marshall McLuhan believed that Gutenburg *made everyona a reader and* Xerox made everyone a printer. Now, everyone is an editor". Clearly, with the new *Document Centre System* concept, the game plan is to take that a stage further and make everyone a printer, publisher *and distributor, too – electroni*cally creating documents anywhere, processing them centrally and electronically *distributing* them *to anywhere* for printing or viewing at the point of need.

The only question is, the premium-buyers will have to pay for that – if they can quantify the business advantages in terms of higher productivity, *better business performance* and greater cost-effectiveness. Only time will tell.

هكذا من الاصل

■ PC operating systems — Report by Louise Kehoe in California

Bug hunters are disappointed

A key requirement of all operating systems is that they work – and keep on working well

Defying the skeptics, Windows 95 has taken the personal computer operating system market by storm. In the first seven weeks after the Microsoft program was launched with a multi-million dollar advertising blitz in August, a record 7m copies were sold worldwide.

Adoption of Windows 95 has been more rapid than that of any program in the history of the personal computer industry. What is more, the new operating system appears to be creating a boom in sales of new applications programs, personal computers and personal computer peripherals.

Sales up to mid-October broke down into 3m copies of the Windows 95 "upgrade" program, purchased by users of previous versions of Windows, and 4m copies of Windows 95 that were delivered pre-installed on new personal computers. Only those copies of the programs put in the hands of end-users were included in the Microsoft figures.

Industry analysts are now predicting that by the end of the year Windows 95 sales will top 15m copies, with consumer purchases multiplying over the busy Christmas shopping season.

Sales may also be boosted by a Japanese language version of Windows 95, which Microsoft plans to release this month. Japan is the second-largest market for Windows 95, after the US, and the Japanese-language version is the 17th of more than 29 localised language editions Microsoft plans ultimately to ship.

Corporete users are also edopting Windows 95 more quickly than many analysts had predicted. Although Microsoft has yet to gather firm deta, the company said that somewhere between 10 per cent and 30 per cent of new PCs installed by business up to the middle of October were loaded with Windows 95.

More than 160 large companies worldwide have signed purchase agreements and put plans in place to deploy Windows 95, Microsoft said. In the US, more than half of Microsoft's top 1,000 corporate customers are either testing the program or already installing it on office PCs.

Perhaps the most impressive aspect of the Windows 95 launch, however, is the fact that to date no significant "bugs" have been found in the new operating system. Microsoft has cancelled plans for a "maintenance release" of the program designed to fix problems found in the first few weeks of sales.

The early success of Windows 95 appears to ensure that it is destined to become the standard operating system for personal computers. Competitors such as Apple Computer's Macintosh operating system and International Business Machines' OS/2 are nonatheless gaining ground, albeit at e slower pace.

Richard Thoman, IBM's chief financial officer, said last month that 11m copies of OS/2 are now in use, including 4m copies of OS/2 Warp, the personal computer version.

IBM sold more than a million copies of OS/2 Warp during the third quarter, ended September 30, he said. IBM insists that it remains committed to OS/2. The company has yet, however, to complete development of e version of OS/2 for its "Power Personal" desktop computers based on the PowerPC chip also used by Apple Computer.

What is more, IBM is now shipping its consumer PCs, called tha Aptiva line, with Windows 95 pre-installed.

Appla Computer shipped more than 1.25m Macintosh computers in the third quarter ended September 30, a 25 per cent increase over the same period last year. However, the company's profits for the quarter dropped by nearly 50 per cent, as it struggled to compete by dropping its prices.

Mr Michael Spindler, Apple chief executive maintains that Windows 95 has nothing new to offer and loyal Macintosh fans continue to claim that the Apple software is superior. Yet the introduction of Windows 95 has clearly narrowed the competitive advantages of the Macintosh operating system.

Apple is developing a new version of tha Macintosh operating system, codenamed Copeland, which is scheduled for release next year. Copeland will "redefine the interface between machines and human beings", says Mr Spindler. "The machine will learn from you, rather than forcing you to learn new applications."

Apple had hoped to broaden the Macintosh software market by licensing its operating system software to other PC manufacturers. This strategy has, however, produced only modest results with four small computer companies adopting the Apple software standard.

There are more Macintosh eoftware licensees who have yet to be announced, Mr Spindler says. However, speculation that IBM might license the Macintosh software for use on a new generation of desktop computers based on the PowerPC microprocessor chip has come to nothing.

IBM recently transferred work on these Power Personal computers from its personal computer company to the workstation computer division and now says that it has no plans to license Macintosh software.

In the server arena, Microsoft is also making waves with Windows NT, which has emerged as e strong competitor to UNIX and Novell's Netware. Windows NT revenues nearly quadrupled in the third quarter, versus the same period last year, Microsoft said.

Although Windows NT is up against entrenched operating systems, the Microsoft product is gaining ground , according to market analysts.

While NT eccounted for only about six per cent of shipments of operating systems for network servers last year, IDC, the market research group, projects that NT will have a 14 per cent of the market in 1996.

Novell's recent decision to sell its UNIX business to Santa Cruz Operation and focus more of its resources on Netware is further evidence that Windows NT is creating competitive pressure in the network server software market.

The sale of Novell's UNIX business, for about $72m in stock, puts the future of the widely used operating system in the hands of SCO which plans to merge Novell's UnixWare with its own OpenServer software to create a standard high-volume UNIX operating system incorporating NetWare networking services. The merged product is expected to be released in 1997.

Later, SCO end Hewlett-Packard will collaborate in the development of a 64-bit version of Unix, designed to run on a new generation of computers based on the next generation Intel microprocessor, known as the P7, that is being jointly developed by HP and Intel.

It will take 'several years' to complete the efforts planned by the the UNIX partners, says Mr Wim Roelandts, HP senior vice-president. The result will, however, be a stronger Unix with a common core, he said. HP and SCO will each offer their own versions of Unix, tuned to specific market segments, he added.

The moves will strengthen UNIX , application developers said, by creating a standard, high volume platform for business computing. Splits remain, however, within the UNIX camp with companies such as Sun Microsystems offering their own versions of the UNIX operating system.

Whether Microsoft can take advantage of this market fragmentation to extend its desktop dominance into the network arena remains to be seen. The battle over network opereting systems is likely, however, to be one of the most hard fought in the history of the software industry.

■ The software battle for the desktop: see page 23.

The Japanese-language version of Windows 95 is being released this month. Japan is already the second largest market for Microsoft Windows software, after the United States. World sales of Windows 95 may exceed 15m copies by the end of this year *Picture Susumu Takahashi, Reuter*

■ Share of desktop operating systems shipped in 1994, according to market analysts at Dataquest:

Windows	59 per cent
Microsoft Dos	17 per cent
Apple Macintosh	9 per cent
IBM OS/2	6 per cent
Others	5 per cent
Unix	4 per cent

■ Forecast percentage share of network server operating systems in 1996 (with 1994 percentage figures in brackets), according to the International Data Corporation:

Novell Netware (37)	34
Unix (27)	26
Other (18)	12
IBM OS/2 (12)	14
Windows NT (6)	14

■ Video-conferencing — Report by Michael Dempsey

A big price tumble

At last, video conference systems are available at realistic prices

Practical video-conferencing facilities have been commercially available for the last decade. But ten years ago the video conferencing suite in an office block or hotel business centre was the focus for a certain amount of drama.

Senior executives wonld troop into the special room at a carefully arranged time to talk to the video image of their colleagues on the other side of the country. This was a very self-conscious form of communication.

When satellite links were used to join groups on either side of the Atlantic, the element of theatre sometimes overshadowed the business purpose of the meeting.

Today, the scene has changed, especially with the edvent of desktop video-conferencing. The latest video-conferencing facilities fall into three categories: there is the traditional system located in e dedicated room and costing up to £100,000. Then comes what is known as a 'roll-about' system. This costs between £20,000 to £50,000 and utilises e large monitor controlled by e computer processor.

But the emerging standard for video-conferencing is also the cheapest: a desktop PC featuring a video camera and running visual communications software can be bought for £2,000 to £5,000.

Nick Melvin: 'Video picture quality has greatly improved'

The arrival of desktop video-conferencing facilities has banished the air of importance surrounding this technology. This may not suit managers who need to bolster their standing by using the latest technical devices, since the humble personal computer is a common tool and lacks the formal atmosphere of e corporate video-conferencing suite. It is, however, the first method of delivering this technology right ecross an organisation et a realistic price.

In the UK, P&P is a £264m computer systems and services distributor that has observed its customers getting to grips with the world of video-conferencing. Nick Melvin is P&P's Lancashire-based marketing manager, and he has observed a flurry of interest around desktop video-conferencing – "we've noticed inquiries increasing three-fold over the summer. On average, we do 20 to 30 demonstrations for corporate customers every week."

Two factors have driven this market, says Melvin. The quality of video images over PC links has improved greatly in the past two years. Slow frame-rates were once a big deterrent to sales: people appeared to move in a jerky, unnatural manner.

Now, with faster frame-rates and the advent of colour transmission, PCs are beginning to provide TV quality images and fulfilling users' expectations. And the ability to share software et the same time across a video link has put the PC in the forefront of this aspect of communications.

"Being able to work together on a document turns the video PC into a strong collaborative tool," says Melvin. His optimism is borne out by market research. Ovum, a London-based technology consultancy, believes that video connections via PCs will boom in the next five years. It claims supplier revenue in the video PC market worldwide will rocket from e 1993 figure of $15m to more than $5bn by the year 2000.

P&P resells desktop video-conferencing systems from PictureTel, Intel, AT&T and Olivetti. Recent agreements among suppliers have created e standard for exchanging files and date between rival systems. Under the mundane title T120 the video-conferencing industry looks set to create a lucrative mass market.

CASE STUDY — Video-conferencing in the financial sector

Scottish pace-setter

For a decade, the Royal Bank has pioneered in video

The Royal Bank of Scotland is proud of its distinctive Scots identity – but an Edinburgh heritage can have its drawbacks, since the bank must operate out of two key centres.

Face-to-face meetings have to take place every day, but the participants are separated by 400 miles. The bank has employed video-conferencing techniques to overcome this challenge for the last ten years. In April 1985, it installed a suite of two studios in each city: the supplier was British Telecom and the system was state of the art, at that time.

Alwyn James of the bank's Edinburgh operations division brefly describes the set-up which includes "e large table with built-in microphones . . . and two screens, with space for three people on each screen."

Although this system sounds unwieldy, Mr James says that "users at the bank have grown to love it – it's very practical and we're hooked on the thing. We've expanded the initial service to include four suites here in Edinburgh, three in London and one in Manchester."

The bank also uses video-conferencing for meetings with its Spanish partner, Banco Santander. James notes that picture quality was "pretty good ten years ago, with resilience being the major change over the years".

Alwyn James: "Users are hooked on the system"

Improved reliability is important, given the increasing frequency of video conferences – James' colleagues engage in 2,500 meetings a year, using this system.

Olivetti's PCC

Now Olivetti's Personal Communications Computer (PCC) has made its debut at the Royal Bank of Scotland. Olivetti has sold 2,000 of these £2,895 systems since April 1994. The PCC consists of a standard Windows PC with a Panasonic or Sony video camera attached to the display terminal. Signals are sent down British Telecom lines.

Olivetti's prime contribution is the software program that drives the BT element of the system, comprising e video conferencing card which instructs the computer processor to handle video signals, the camera and a telephone handset.

The attraction to BT is mutual, with the telecoms utility purchasing more than 500 units for use across its operations.

Britain's ministry of defence has also appointed Olivetti as its sole desktop video-conferencing supplier.

A small number of bank executives, plus the card services unit which operates from three sites, have been issued with PCCs. Mr James acknowledges that the ability to deal with (and change) documents on screen, while users are talking, is important. He characterises the PCC function as "a more user-friendly form of e-mail."

This is quite a significant observation, given that some commentators believe that the rise of video-capable PCs will signal the demise of electronic mail.

At the Royal Bank of Scotland, a decade of familiarity with video-conferencing has created a user-base that is now hard to sway – "because of our extensive use of video-conferencing studios, we're probably less impressed than someone whose first video communications tool is the PCC," he comments.

Michael Dempsey

■ Computer-telephony integration

Report by Claire Gooding

A surge of new products

The convergence of computers and telephony is leading to a plethora of innovative applications

Oboeist Malcolm Messiter, director of the London Festival Orchestra, calls home from Guatemala to collect his telephone messages, data files, and faxes.

He is there on a concert tour, but he needs to to stay in touch with home because in between musical assignments, he is busy launching a gadget called the PA that enables him to do just that from anywhere in the world.

Mr Messiter's other occupation in the UK is the Borehamwood-based company called Trans-Send. It has been established for ten years as a supplier of communications products for fax, terminal emulation and the Internet, with customers such as Mercury, France Telecom, and Racal.

With the launch of the PA product, Trans-send is now courting the new market of computer-telephony integration. (CTI) for the small-scale office and bome user.

Until recently, CTI was a large-scale application, an investment made by large companies with a high volume of incoming calls. Most such users graduated from Automatic Call Distribution (ACD), telephone systems which route calls to an appropriate operator, to CTI, which links the call (sometimes automatically, via Calling Line Identification) to a database record.

Transition

Now CTI is moving down on to the desktop, and even into the bome, with providers' sights set on remote working, bome offices, and teleworkers. There has been an explosion of new telephony applications for everything from voire messaging (a sort of company-wide answering machine with limited call-routeing ability) to teleconferencing.

Appealing to a much wider market are the potentially powerful applications that integrate computer databases and messaging systems with voice, fax and data input.

Suddenly, the established providers with their roots in large-scale integration find themselves swimming in the sama pond as computer companies with very different backgrounds. Some are new to the voice area, such as Novell and Microsoft, wbo recently declared their interest. Their very size and influence in personal computing and office applications has quickened the voice market.

Others are also established in existing niches, but quick to offer 'added value' services which bring them into new markets. Anyone exploring the Voice Europe show this week at Olympia 2 in London (until November 2) is likely to be overwhelmed by a plethora of new products and services. Supportive products and services are also available, but there is still room, in this very unformed market, for entrepreneurs such as Mr Messiter.

"We're bringing into a small office an application that was previously only possible in large ones," he says of the Trans-Send software. "It allows small companies with one or two staff to run more efficiently. The Trans-Send software answers the phone and it handles voice, data and fax traffic appropriately in a single product.

"In the past, all of these things have been handled separately but I know of nothing else that can handle all three to that extent that we do, bundling all three into one."

On receipt of a voice message, the system stores it and Mr Messiter can enter a PIN number to hear his messages remotely. If the program is set up to know where he is, the message can be relayed forward – voice, fax or data wherever be is – and the outgoing message to callers can be changed remotely, as in an answering machine.

Another service is fax on demand, delivered like an extra option in a voice-messaging system. Callers hear a message telling them they can be faxed a brochure or further product information.

"Lots of people are doing something similar, but what we've done is to incorporate some new features and bundle them together with an existing application," explains Mr Messiter. "It's just like having an extra 'body' in the office – sometimes more efficient, and it stays on all night."

The product was launched last month on the UK market for a price of £99, aimed specifically at the SoHo (Small Office, Home Office) market.

At the Voice '95 show, GPT Communications Systems is showing its Flexible Office suite of applications, aimed at teleworking and 'hot desking'. Already a supplier of video-conferencing systems, and digital telephone systems, GPT now aims at the same goal of integrating voice, fax and electronic mail communications within a controlled desktop architecture, via Microsoft Windows – "the beauty of CTI client/ server-based open systems is that they allow businesses to streamline their entire voice, fax and e-mail communications with a single controlled architecture," says Chris Ellis, GPT marketing manager.

Malcolm Messiter: aiming at a new market for CTI products in the smaller office

Also at Voice 95 is Novell, sharing a stand with Datapoint, the first Novell Telephony Solutions Centre, to show range of low-cost office CTI solutions. The API – Applications Programming Interface – is the gateway through which telephone and computing technologies converge to make products such as PA and possible.

Some of the largest suppliers in the business have joined forces to create the Enterprise Computer Telephony Forum, ECTF, with the aim of addressing interoperability issues. The members of Versit Initiative consisting of IBM, Apple, AT&T and Siemens, joined ECTF at the end of July.

Versit has already issued specifications for the Personal Data Interchange and GeoPort, a high-speed wired connection for computers, mobile devices and telephones, and a blueprint for developers of video-conferencing applications, H.320. It is working on a CTI 'encyclopaedia' specification with Novell. Together, Versit and ECTF want to keep CTI 'open' so that customers can mix hardware and software platforms on the desktop, or on server and mainframe systems.

Their idea is to work together to allow the development of multi-vendor CTI applications, based on the various international standards. Common protocols include Microsoft's TAPI (telephony application interface) and Novell's TSAPI (telephony services application interface).

Nortel, an established CTI integrator, is one of tha members of the forum. As a supplier of the Meridian 1 Private Branch Exchange (PABX), one of Nortel's principles is that any new and emerging technologies, such as video-conferencing, should be integrated with existing hardware invest.

"With higher speed links like ISDN 2 and ATM beginning to emerge, it is now possible to create a one-man call centre, where the single agent is connected to a remote server. Bringing multimedia to the desktop is no longer seen as a gimmick – it has a real business benefit," says George Montgomery of Nortel, senior manager for desktop applications. Aimed at just such integrated operations is a new product called INDeX from SDX of Welwyn Garden City, launched with the same avowed aim of bringing together ACD, voice processing, CTI, office telephony, and Euro-ISDN connectivity, without making existing equipment redundant.

The PC is growing in importance in CTI, but there are some who see some flaws in the present arrangements of add-ons and extras – "there is little point in trying to implement CTI if the single connection to the PC can't offer the quality of speech we already have from separate telephone and PC lines," says Kevin Moran, product marketing manager at Motorola ISG.

He points out that while it is already possible to have a common line into the user premises for voice and data , PCs still need a separate device to connect to the network – "the integration of this device into the PC is the remaining obstacle to true single connection CTI at the desktop," he says. "The PC's processing power will need to be increased, and the necessary software of option cards fully integrated. Costs are dropping fast, and this makes CTI at the desktop almost a certainty."

■ Wireless local area networks and cordless phones

Report by Joia Shillingford

Free to roam – at a price

Would-be users must still pay a premium for wireless communications over fixed cabling

The first wireless local area networks (Lans) failed to spread because they were too expensive and too slow. But a new generation of products could move wireless Lans out of niche markets and into the mainstream.

Computers or cash tills in a wireless environment contain radio interface cards and antennae that send a signal to the nearest base station. A series of base stations (usually mounted on the ceiling) provides a backbone network that links all the devices together enabling them to send and receive information or transmit it to a central computer.

Most wireless Lans use radio frequencies to exchange information. But other technologies such as infra-red (a beam of red light) and microwave (high frequency radio waves) can also be used.

Advantages

Doing without physical cables between devices has a number of advantages. They include:

☐ Added flexibility:
Selfridges, the London store, wanted more flexibility to move equipment around especially during seasonal peaks, when more cash-tills are needed. Previously, if tills needed to be moved, this had to be done at times when customers would not trip over cabling ducts. Now, its Siemens Nixdorf (SNI) cash tills can be moved during shopping hours.

☐ Solutions to building restrictions:
When the National Capital Commission of Ontario wanted to link PCs in one building to a central computer in a building nearby, it used an infra-red link from the Canadian company, A T Schindler. This meant it did not have to apply for permission to run a cable across the street. Wireless Lans are also useful in some listed buildings where legal restrictions prevent many changes being mada.

☐ Improved customer service:
In the US, some stores are giving sales staff hand-held point-of-sale (POS) devices. This experiment enables them to follow customers around the store, giving advice (for example, on the choice of suit). Then, when the customer has made a selection, they can take the order immediately.

☐ Provision of up-to-date information:
A UK supermarket is using an infra-red system made by Pricer of Sweden to update electronic price displays in several stores. In addition, wireless Lans are quick to install and can cut costs if PCs or POS terminals are moved frequently.

Market players

There are 25 suppliers of wireless Lans worldwide, according to the Yankee Group. Among them are AT&T Global Information Solutions, 3Com, Norand, Telxon, Proxim, Symbol, Photonics and Motorola. Most of the leading computer vendors also sell wireless Lans, often made by other companies.

Second-generation products – whether from newcomers or existing suppliers – tend to be faster than earlier products. Nearly all products now offer speeds of one or two megabits per second (Mbps). Some new and soon-to-be-launched products claim to offer as much as 10 Mbps. Among them is A T Schindler's infra-red wireless Lan, available in Europe via UK-based Ethix, since September. Olivetti'a Cambridge Laboratories have developed prototype wireless extensions, which can connect mobile users into a fixed ATM (Asynchronous Transfer Mode) network that operates at high speeds. The extensions offer a raw data-rate of 10 Mbps.

> Second-generation wireless products allow the facility of 'seamless roaming'

Another feature of aecond-generation products is that most allow so-called "seamless roaming", enabling users (for example, with portabla or hand-held terminals) to move from ona cell or base station to another without losing the connection.

But would-be users must still pay a premium for wireless communications over fixed cabling. The Yankee Group believes that wireless Lans will not break out of vertical markets and into the general-purpose office market until costs fall to no more than twice that of fixed 10 Mbps Lans and standards are adopted. At present, wireless Lans typically cost around $800 (around £500) to $1,600 per user.

In the UK, most suppliers now support the Institute of Electrical and Electronic Engineers 802.11 standards, and the 2.4 gigaherz communication frequency. Most have also developed credit-card sized PC interface cards that conform to PCMCIA (Personal Computer Memory Card International Association) specifications.

It still cannot be assumed, however, that one manufacturer's radio interface card or hand-held device with built-in radio will work with another's backbone network.

Vertical markets

The Yankee Group estimates that nearly 80 per cent of the $117m generated by wireless Lans worldwide in 1994 came from vertical applications (such as retail, medical, warehousing/distribution). It expects these applications to account for $725m in 1998.

Yet despite recent product improvements, it believes that "wireless Lans are at least one generation away from meeting the fundamental requirements of general-purpose Lans". It expects this segment of the market to be worth $332.2m by 1998.

Cordless phones

In fact, it is easier to make a business case for using cordless phones in the office than for using wireless Lans. Cordlass-phone users do not miss calls when, for example, they leave their desks to go to the photocopier. And, because users ore easier to track down, the organisation will spend less money calling people back.

There are two standards for cordless office phones: DECT (Digital Cordless Telephony) and CT2 (the digital technology behind the former Rabbit telepoint network). Most aee DECT as the cordless office standard of the future, but Northern Telecom has had some success with CT2.

Dual-mode handsats are also being developed. These are cordless phoues (working to the DECT standard) to the office and mobile phones (working to the Global System for Mobile [GSM]) standard outside it.

Telia, the Swedish telecoms operator, is carrying out a pilot test using Ericsson dual-mode handsets. Cordless handsets in the home or office can be used by new telecoms operators to bypass local-loop telephone networks, such as British Telecom's.

When it launches its service, Cambridge-based Ionica plans to equip users in its area, with cordless handsets enabling them to connect directly into long-distance networks.

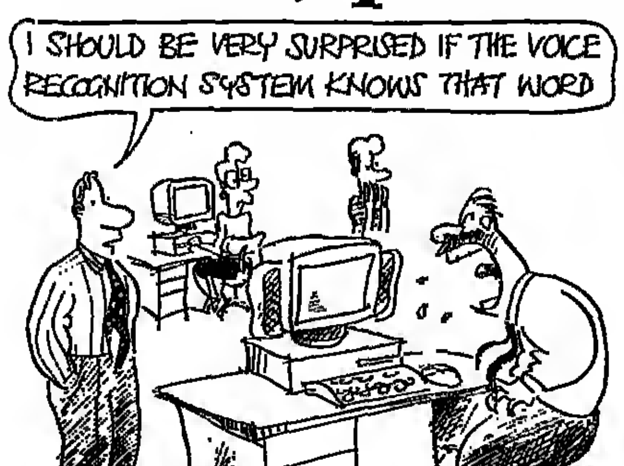
For the truly mobile office worker who wants both wireless Lan and a cordless phone, the Japanese company NEC, has developed a mobile system that combines both. The system – to be launched in Japan in 1996 – equips users to participate in group meetings and conduct group work from afar.

■ Dictation/voice systems

Report by Claire Gooding

'Take a letter, please, PC'

Voice recognition has advanced so far that dictation systems are now strong enough for users to forge a new bond with their personal computers



If users of most of the latest voice recognition systems on PCs speak firmly and clearly, with a little pause between each word to make it discrete, then – hey presto! – the words appear magically on the screen.

With, that is, a little help from their friends: judging from the experience of users, many people who take the plunge with a dictation system (and keep going), need some help.

Someone else often introduces them to the package, sees them over the initial learning bump, tailors it to their needs, and eventually, helps them spread the word (literally) through the organisation.

This trend is typical of the way dictation systems are introduced to the office environment: one pioneer braves the learning curve and then others adopt the technology.

The process of 'teaching' the system to recognise your voice can be frustrating and most pioneers need an experienced hand-holder. One such is John Curgenven of Putney-based Pyxis, a company he started after retiring early from IBM – as much from enthusiasm for the technology as for commercial reasons.

"We in the industry should take technology to the user, and not expect the user to perform unnatural acts in getting to the technology," he says. "That encapsulates my view, after 25 years in IBM. User-friendliness matters more than anything: we should all be able to use the IT naturally."

Pyxis specialises in tailoring speech applications to the end-user, adding its own macros and short cuts to productivity.

"Our own software enhances the usability of the software," explains Mr Curgenven. Pyxis has ready-made 'macros'– chunks of code behind the scena that integrate the speech software with all the standard desktop office tools, such as the Microsoft Office suite.

The macros also deal with one of the clumsiest aspects of speech-driven tools: navigation. Windows, menus, and mice were designed for fingers and eyes. Reviewers of speech products have complained that one of the more wearisome aspects of dictation products is the moving from function to function, calling up menus by voice.

This is just the kind of extra work Curgenven condemns as "unfriendly". He quotes the editor of the UK edition of *What to Buy for Business*, who warns that while users might avoid Repetitive Strain Injury (RSI), through not using the keyboard, they risk straining the voica instead – "our macros make it easy to adapt the software to the way people actually work," he explains. "That means integrating speech with database and spreadsheets so that it is easier and quicker to talk, than type."

A quick demonstration of a personally-addressed latter makes the point. The words 'take a letter' bring up the word processor, ready for dictation, with letterhead and date. The name 'John', followed a second later by the surname sands the system whizzing off to the database: less than a second later there appears the appropriate address and greeting, ready and waiting for the substance of the letter to be dictated.

A short session with the software makes it clear just how important it is to have someone experienced on hand for the first attempt. The microphone has to adjust to different room-sizes and acoustics.

It was relatively easy to run through the short list of words which teaches the system how a particular voice pronounces the English phonemes, but it was baffled by the huskiness caused by a laryngeal problem. Mr Curgenven soon diagnoses the problem and has things back on course with an adjustment. Like magic, the text appears on the screen.

Pyxis estimates that an all-in package price is £1,459, including 'tailoring', training, implementstion support, as well as the software, the microphone and other hardware accessories.

Pyxis is a relative newcomer, and far from alone among value-added resellers in the speech recognition market. Responsive Systems, of West London, deals with several products, including Macintosh speech products such as PowerSecretary, Kurzweil Voice, Dragon Dictate and others, and has developed its own headset microphone, Talkmics, to improve the accuracy rate of speech-to-text dictation.

It is notable that various voice prodncts have very different backgrounds and pedigrees. Dragon Dictate has its foundations (and a considerable established user-base) in use by people disabled through RSI or other problems, and its US-based originators left IBM'a gronnd-breaking apeech research unit to pursue their work in this area.

Philips Dictation Systems, an operating division of Philips Electronics, comes from the other end of the spectrum, having years of experience in large-scala tape-based dictation systems in offices across the world.

IBM's own extensive speech-research has led to a range of products, from the personal such as VoiceType to the general, used in large computer-telephony applications.

Both IBM and Philips Dictation Systems, which claims to have the first continuous speech recognition product, have adapted their generic speech 'engines' to large-scale applications, where hands-free operation is paramount.

Hospital work and pathology are obvious applications. IBM's VoiceType Dictation for Pathology is already in use at the Royal Free Hospital in London, where it is used to analyse spoken words and put them on the screen at a rate of 70-100 words per minute.

The application was tailored specifically for pathologists, and has a specialist vocabulary of 19,000 words, as well as user-defined phrases, to speed the throughput of reports.

IBM Voice Type works on OS/2 or Windows, with several language versions available for its standards business vocabulary, including Arabic, for around £900.

Philips has also developed hospital systems, specifically in radiology. There are 23 working sites already in Austria and Germany; and it was implemented this year in two UK hospital pilot sites.

The UK English continuous speech-processing module is still under trial in a hospital environment, but Bernie Woollaston, managing director of Philips Dictation Systems, sees the real future of speech applications in office-wide applications, not isolated on the desktop.

"There is a fundamental difference between us, Dragon, IBM and Kurzweil," he says.

"The obvious differences are that all of the other systems are interrupted discrete speech, so users have to speak unnaturally, but also they are all single-user systems installed on an Individual PC, and only work on that PC."

Woollaston argues that Philips understands the real dynamics of high-volume speech applicationa, through its background in dictation systems – "you don't hear the term 'typing pool' so much now, but the function still exists, and we understand how to manage those systems.

"We also understand what happens to a network: the technological demands of power-greedy voice files fed around a building on copper wires. So when we move forward into speech processing, we're coming from the angle that it needs certain management techniques. There are a lot of disappointed users out there."

Philips, too, works through VARs who build office-wide systems for specialist applications such as law and medicine, around the basic speech 'engine', that re-constructs words and phrases from phonemes and contextual information – for example, to distinguish between the words 'too', 'to', and 'two'.

هكذا من الاصل

Mobile computing: more travelling executives are using a new class of sub-notebook portable PC to work on the move, wherever they are. In use here is an advanced PC from Siemens Nixdorf which includes a removable hard disk to ensure total security, plus PCMCIA connectivity for local area networks

■ Remote data communications/paging

How to stay in touch with the office – from 30,000 feet

Workaholic air travellers can now plug-in their laptop PCs to keep the memos flowing

Before business-class airline passengers relax, kick off their shoes and lower the seat back, they may soon be obliged to check their electronic mail. Mobile data communications have been cleared for take off as ona of a range of interactive services which airlines including Virgin, BA, Lufthansa and Singapore Airlines now offer on board.

Passengers will be able to plug their laptop computers into the phone socket at their seat to send and receive data from the ground. Data is transmitted to ground stations run by Skyphone, the consortium formed by BT, Singapore Telecom and Telenor International (formerly Norwegian Telecom). From here, it can go anywhere on the terrestrial networks.

Mobile data communications is a service which the airlines are very keen to offer, says Peter Cheah, manager of BT Aeronautical Services. However, with no power source at the seat the Achilles heel of the laptop computer, the length of the battery lifa will impose limits.

Passengers who cannot bear to be disconnected will be able to console themselves by using interactive data services to send flowers, hire cars and book hotels via the screen fixed to the seat in front.

While sending e-mail from an aircraft may still be slightly precarious other forms of mobile data communications are robust enough for companies to bring them within the ambit of their information technology strategy.

In particular, the growth of the GSM digital cellular networks and of dedicated public and private mobile data networks such as Paknet are fuelling the growth of the market, according to Colin Sorrell, managing director of GRS, a telecoms coosultaocy, and founder of the Mobile Data Association.

The association was set up in 1994 to encourage mobile data applications by developing a database of case studies and promoting best practice. In its first year it bas reached e membership of 57 organisations covering the supply and user side of the industry.

Mr Sorrell estimates that there are now 80-90 corporate users of mobile data in the UK witb between 100,000-120,000 individual users.

This compares with 70,000-80,000 in Germany, the second largest market in Europe, and 850,000 users in the US.

The use of paging and mobile data networks by UK motoring organisations such as the RAC, the AA, emergency services and taxi companies is well-established and this market is relatively mature. Now, companies with field sales or service staff are applying the technology to push information to the front-end of the organisation, improving customer service and control of staff.

The power of the technology can be seen in what is claimed to be the biggest mobile data application in Britain: by equipping its field engineers with laptops and the ability to access customer service, scheduling and parts databases, British Gas says it will reduce the ratio between engineers and administrative back up staff from a ratio of 1:1 to 30:1 by the end of 1996.

Tha engineers previously worked from 91 depots, now reduced to seven, and by the time the system is fully up and running the number of engineers will be cut by several thousand.

> We are now reaching the point where a mobile worker can have all the facilities of office-based staff

The British Gas system uses a private mobile radio network but transmitting data over the puhlic cellular networks, till now the province of voice, has become a realistic proposition according to Mr Sorrell.

Along with their counterparts in the air, train passengers and car drivers need to plug their laptop computer (fitted with a modem) into a cellolar phone. It is worth noting, however, that not every digital cellular phone can handle data. But the technology is sufficiently advanced for one insurance company to be piloting a system which allows its sales force to access a corporate database to do queries, get quotes, and keep the information on their laptops up to date and a pharmaceutical company to be using it to speed tbe transmission of clinical trials data from the field.

One of the protagonists, Simon Farr, Product Manager at Mercury Mobile, says that GSM networks are the obvious platform for mobile data applications.

GSM has the inherent capability to handle data, fax and messages all from tbe same handset and it is a standard in Europe and other parts of the world. Without some key applications, this is clever but meaningless. Companies need to look at their business process and examine what benefits they can get from using GSM to move data.

Although, as yet, few have launched into this in a big way, companies such as Digital and Unisys, the information management companies, are transmitting data over GSM networks to enhance the productivity of field engineers.

Tha engineers can access engineering data such as schematics of computer boards. Mr Farr says this is more efficient than pre-loading the information into a laptop compnter because it allows the data to be managed and updated from a central point.

We are now reaching the point where a mobile worker can have all the facilities of office-based staff, with access to electronic mail and other resources on local area networks. The next stage will be functions such as remote ordering enabling a sales person to place and order while they are with the customer, check stock levels and give a firm delivery date.

Until last year, the mobile data market was limited to specialist vertical applications such as emergency services and taxi cabs transmitting a limited amount of data at any one time. Now, the emergence of horizontal services such as database access and e-mail is now changing the nature of the market, says Mr Sorrell.

However, the time taken to set up links and the relatively slow speed of transmission (celiular networks are currently limited to 9.6 kbps) means that – for the tima being – users will limit themselves to messaging-type applications, rather than regularly transmitting very large amounts of data.

Nuala Moran

Always in touch: Neil Parkinson, senior telecoms analyst at Dell Computers, can be reached on his Companion cordless phone – from Nortel – to deal with technical problems, whever he is in the office.

■ Voice mail and voice processing

Report by Joia Shillingford

Benefits talked up as prices fall

Computer and voice mail companies collaborate on applications

The success of the Internet (the global electronic-mail and information network) seems to be worrying voice mail companies. Instead of selling plain old voice mail, they talk of business-critical applications, e-mail-like voice networks, and unified messaging (fax, voice and electronic mail).

Another reason why voice mail is being talked up is that prices are coming down. This is leading suppliers to develop innovative applications for which they can charge more. Below, we look at some of the newest uses of voice mail and voice processing.

At their aimplest, voice messaging systems provide similar features to answerphones, allowing callers to leave messages. But they can do much more. For example, by dialing tha appropriate voice mailbox oumber (and a code), users can play messages back, or forward them to another mailbox.

Innovative uses of voice mail include using it to contact staff in an emergency and making "hot-deskers" more accessible.

Since the beginning of this year, Total Oil Marine has used a voice system from Atlanta-based C3 to contact its Aberdeen-based safety team in case of on or offshore emergencies.

Now, when there is an emergency, the security guard (or duty manager) simply records a voice message in as much detail as required onto the C3 system, presses a single button, and hangs up. The system then calls up details of the 13 core members of the safety team and broadcasts e message to their pagers asking them to phone in and listen to the voice message. It can make eight simultaneous calls.

Previously, the 13 were paged when there was an emergency, but the messages that could be transmitted were limited in length to requests such as: "Please report ASAP to the emergency response room". This meant that briefings could only take place once the team had assembled – with vital minutes lost.

Today, if the paging messages – asking the team to listen to the voice message – are not responded to, the system will escalate to calling home phone oumbers or alternative staff. However, the system has not had to be used in a live *situation, in tests it has taken* 8-10 minutes to get a response from everyone in the team.

Hot-desking

Ernst & Young management consultants use voice mail to support tbe practice of bot-desking, where staff do oot have their own desks in the office, but can book one when they need it. John Neal, the UK telecoms manager at Ernst & Young (E&Y), says: "We used to have a secretary who bad a board showing which desks different coosultants were sitting at that day. But today, we use Octel's bot-desking application to belp get calls through to consultants."

Now, after pressing two digits, consultants can tell their voice mailbox whicb pbone number they will be at that day. All calls will be transferred to that oumber when a caller phones in.

Consultants can hot-desk from within the office (by typing in the extension oumber of the desk they are sitting at), from home, from a client site or from anywhere in the world.

Integrated telephony: an engineer monitors the flow of calls to an electricity company, prioritising them into normal, urgent and emergency categories, using GPT Communication's Hicom Dispatcher phone system

The part of the call which is transferred from the voice system to, say, a client site/mobile phone is paid for by Ernst & Young. The only irritation is the time it takes to transfer a call. It can take 8-10 seconds before the final phooe rings and then there may be an additional delay before that phone is answered. To reassure callers that they have not been cut off, a comfort tooe of little beeps every three of four seconds is played.

Interest in voice technology is growing as computers and telecoms begin to cooverge. The result is that many computer and voice mail companies are beginning to collaborate. For example, Compuserve – the e-mail and information *network – is to add near real-*time voice transmission to its online conferencing tools under a licensing agreement with Xing Technology. And IBM has recently demonstrated voice mail on the Internet.

Octel is taking a different approach. It has iotroduced Octelink, whicb it describes as the Internet of voice mail. The system allows a user to leave a voice mail for someone in another company in a voice mail post office. All the caller oeeds to know is the recipient's telephone number and name. The message will then be forwarded to the recipient's company and posted in his or her voice mailbox.

Advantages

The system is available in the US and will be introduced in the UK in 1996. So it could eventually provide a cbeap way for European-based callers to leave voice messages for US contacts, although there will be a transaction cbarge for using the system.

Michael Persky, marketing director for Octel in Europe, says: "It will eventually be possible to send fax or e-mail messages via Octelink, too – either from a voice mailbox or from an electronic mailbox."

In a separate development, the company is working with Microsoft to enable voice messages to be embedded in electrooic mail items. This will enable users of Microsoft Exchange to play back the voice part of an e-mail message through their PC's speakers.

GPT-CSL is working to integrate its voice mail system with Lotus Notes, Lotus Development's confereocing and email software, and Lotus' cc: *Mail Lan* e-mail system. The result will be a unified messaging system, of whicb there are already a oumber. Chris Ellis of GPT-CSL says: "It is much easier to handle ooe's voice messages efficiently if one can see a list oo the screen."

To date, demand for unified messaging systems has been slow. One factor is cost; they can add as mucb as £30,000 to the purchase price of a £6,000 100- user voice mail system.

Some of the innovation in the voice mail and voice processing markets must be hitting home, however. By 1999, the research consultancy Dataquest predicts that together the UK, French and German markets for interactive voice response and messaging will be worth $671m, as agaiost $204.2m in 1994, a compound annual growth rate of 27 per cent.

■ Electronic commerce — Report by John Kavanagh

Purchases on the Internet 'could potentially exceed $200bn by year 2000'

Forecasts vary greatly for consumer sales via the 'Net – the potential is high, but, for now, business users are in a minority

One little word has put into perspective the current excitement about electronic commerce over the Internet. It came from an unlikely sourca: one of those market research firms which are normally so confident in their precise percentage point predictions of market growth.

Peter Cunningham, founder of international research firm Input, uncharacteristically hedged his bets when he addressed a business audience recently. Electronic commerce between businessea via the Internet, he said "may reach over $50bn by the year 2000 in the US".

Not the usual "growth will be 24.6 per cent, to reach $51.8bn", or similar precision: business over the Internet "may reach over $50bn".

Mr Cunningham added that outside the US, business-to-business sales would be "about $25bn". This lack of certainty highlights the fact that despite the undeniable growth of connections to the Internet, and its benefits for electronic mail and as a new method of information gathering and advertising, its role in buying and selling is unclear.

This is further reflected in widely varying forecasts of coosumer sales: Forrester Research expects consumer purchases over the Internet to grow from $240m in 1994 to $6.9bn by the year 2000 – yet Input says the 2000 figure "will potentially exceed $200bn".

Uncertainty here is down to several factors – and not least is the fact that despite all the publicity about the Internet, business users are still in a minority. A UK survey of more than 2,000 organisations shows that 27 per cent are using the Internet in some way, 9 per cent are installing facilities, 15 per cent are evaluating it and 24 per cent are thinking about it. In another survey, 46 per cent of non-users claimed they had not even heard of the Internet.

Research findings

In addition, Internet users are some way off as regards using it for marketing, let alone buying and selling. For example, research among members of the UK EDI Association, the leaders in electronic data interchange for exchanging orders, invoices and other business documents, shows that only two-thirds even use the Internet for electronic mail and just a third have a full connection.

Even companies which *are* using the Internet to do business are not approaching it properly, according to Forrester Research.

"Early interactive merchants are not thinking straight," says senior analyst Emily Green. "You can't test a new channel with 10 per cent of your product-line or fully probe the market with mugs and tee-shirts.

"Current efforts do not give real value. Merchants have yet to embrace and promote tha benefits of the new media: timeliness, convenience, ease of use and lower prices. Without these, customers will stick with traditional methods."

Forrester Research says companies should "create a new interactive experience" for potential customers. So far, this "interactive experience" is largely limited to providing information and advertisements through World Wide Web pages. Actual buying and selling has not got mucb beyond "a dozen pizzas and two or three flower bouqnets a week", as Forrester Research puts it. One factor has been security, especially when electronic payment is involved. Leading software companies, financial institutions and security specialists are working separately and together on this issue and it is expected to diminish in the near future.

However, electronic commerce between businesses faces another obstacle, raised by the fact that the Internet is not owned or run by one organisation but depends on links between computers run by thousanda of different organisations across the world.

One UK EDI specialist, now working in Hong Kong, has experienced the problem at first hand. John Sanders, managing director of The EDI Shop, was one of 8,000 Internet users in Hong Kong who were cut off twice in a fortnight, once for five days, early this year. This has happened in Europe too, for reasons usually connected to non-payment of bills by Internet service providers.

"If a company wants to send EDI messages to another company over the Internet, can it be certain that the address is provided by a reputable and secure aervice providar – or even that its own provider is legal and solvent?" asks Mr Sanders, who is speaking in a debate on EDI and the Internet at the Electronic Commerce '95 exhibition and conference at London's Barbican centre this week.

"Is it advisable to send an important document such as a purchase order or a contract to an address that might be insecure or unreliable?"

A related issue is that message delivery times are not guaranteed. The dependence on organisations' computers linking to each other means messages might get through in 10 minutes or 10 hours or longer. Companies depending on just-in-time manufacturing or shelf-filling need to ask if the Internet is good enough here.

With traditional EDI network services, messages typically arrive immediately or within a few minutes, even if the trading partners use different services. In addition, there is a detailed audit trail from end to end.

"Big companies parhaps want something a bit more solid than the Internet," says Adrian Garcia-Sierra of the University of Wales EDI Research Centre, sponsored by British Telecom. "You hear of the odd company doing trials, but the number of live projects is very few."

Viewpoints

He and other observers believe that true electronic commerce between companies on the Internet on a large scale is still five years off.

These views and statistics do not leave much room for complacency among the significant majority of companies which are not seriously using the Internet yet. Companies should certainly at least be considering putting promotional material on the World Wide Web, a cheap way of getting a public presence on the Internet.

But the research does suggest that companies need not be panicked into changing the entire way they do business.

As John Sanders at The EDI Shop puts it: "The Internet is a wonderful business tool – when used correctly. We rely on it – but not for electronic commerce. Treat it like the mail, not like a courier."

He adds: "I actually hope that the Internet will never be made acceptable for EDI, because the measures needed for this to happen would destroy its openness and cheapness and therefore kill it as a business tool in these other areas."

'Sofa surfing': a new service, CD-Online, now brings full Internet access to the living room on TV screens across the UK. There is a sign-up fee of £20 and e monthly subscription for 'The Net on Your Set' service of £12, plus the cost of a local call – 1p a minute, cheap rate when users are on the Internet. More details are available on email:phouse@easynet.co.uk

■ Electronic information services — Report by John Kavanagh

A man with a mission

Reducing the paperwork could bring substantial savings for a distribution company

Rodney Stoyel is on a mission: to cut paperwork across the retail and distribution chain. Warehousing and distribution company Inter Forward, where he is UK managing director, has already opened up its internal electronic information services to its customers – and it is now extending access to the customers' own customers.

"Behind every movement of goods there are four or five movemeots of paper, so we all ultimately need to address how we handle information," says Mr Stoyel.

The information services are initially related to Inter Forward's Home Serve scheme. The company handles home delivery for most consumer white-goods manufacturers and for some retailers, including such suppliers as Comet, Hitachi, Philips and Toshiba.

It delivers from stocks held in its own warehouses or picks up special orders from manufacturers. It also deals with the end-customer, who might be buying from a retailer or catalogue, to arrange a delivery time. The delivery includes installing, say, a television set, linking it to a satellite dish and video recorder and demonstrating it. This service costs manufacturers £35.

Mr Stoyel also has a mission to turn the company round from losses of £3m this year on a turnover of £62m. He sees IT in general and information services in particular as critical here and expects them to cut the losses to under £1m next year – "accurate and on-time movement of goods is now assumed in the industry, so we need new ways to differentiate ourselves," he says. "Our added value lies in IT."

Inter Forward is well automated internally. Orders come directly into its computer systems from manufacturers and retailers by electronic data interchange. The information passes into an administration system which presents the end-customer details on terminal screens to staff. The staff call to arrange delivery, using prompts presented by the system to ask questions about access, time and other factors, plus data from a transport management system to find a suitable delivery slot.

The system does not wait for action, but reminds users when necessary: for example, to call again if there was no answer yesterday or to chase and enter a proof-of-delivery document after delivery.

Full record

Every action is recorded, so there is a complete history of telephona calls and goods movements with each order.

All proof-of-delivery documents are now scanned in and stored as images on optical discs, so they, too, are available on-line: these run to around 5,000 a week.

Having cut paperwork internally, Inter Forward is now encouraging its customers to do the same, by giving them access to this entire system.

Rodney Stoyel: 'Behind every movement of goods there are four or five movements of paper'

Manufacturers can now connect to Inter Forward's internal system, enter a code and view all the information and current status of all orders for their own products, including all the screens used by Inter Forward staff as they talk to consumers.

Manufacturers can alao request copies of the proof-of-delivery documents and have these faxed automatically.

Companies used to holding physical proof in the form of paper were taken aback at first and Inter Forward gave PCs, modems and fax software to some of its bigger customers.

"We just needed it to happen," Mr Stoyel says, "but customers are now buying the equipment themselves."

The impact has been considerable: "Telephone and fax enquiries have virtually disappeared. We have been able to eliminate our central customer service operation and rednce the head office proof-of-delivery staff from 10 to three.

"Our customers have cut the number of bogus enquiries from their retailers: for example, retailers might try to delay payment by claiming they had no proof that an item had been delivered to a consumer; a manufacturer can now go on-line to our system and get it to fax an image of the document to the retailer, entirely automatically. This means the manufacturer gets paid more quickly and, itself, needs fewer staff handling enquiries: some have cut their own customer service departments."

The information services have come to the attention of Inter Forward's customers' customers, especially mail-order catalogue companies. Inter Forward is therefore now extending on-line access to these companies: Littlewoods was the first to go live, in September. It, too, can now follow the progress of each order.

"Previously, a consumer contacted the mail-order company with any qnery about delivery and it contacted the manufacturer, which contacted us," says Mr Stoyel. "The process can now be short-cut by tha mail-order company – which isn't actually our customer – going on-line to us."

Mr Stoyel expects to extend such on-line services to other product and service areas.

"It's the customers' own information anyway, so why shouldn't they access it?" he says. "They have PCs and terminals, so they can look at it on-line themselves."

هكذا من الأصل

■ Electronic investors

Report by Stephen McGookin

Home-based brokers stay on-line via the Internet

The number of personal on-line brokerage accounts, now standing at more than 600,000, could reach the million mark over the next three years

We ara frequently reminded that live in a truly global marketplace – where, all over the world, at virtually any hour of the daily cycle, there is always some form of market activity.

The potential for trading and monitoring stock movements around the clock has been reflected in the growing presence on the Internet of individual Stock Exchanges, from Amsterdam to Zagreb.

Internetworking – and the increasing lack of a relationship between a physical location and the source of information – is indicative of the transformation of dealings in the financial sector.

Office and home-based brokers and fund managers can keep track of market movements around the world using the global computer network, which has perhaps as many as 50m users.

A complete listing of companies quoted on worldwide Stock Exchanges on the Internet, classified by country from Argentina to Venezuela, can be found at *www.payment.com/exchanges/exchanges.html*

Where tbe Exchanges offer some kind of regularly updated market information or daily details of sectoral movements, this information is usually also available to individual bome-based investors wbo might want either to track the performance of their portfolio or even deal through their brokers via the network.

Increase

The number of personal on-line brokerage accounts has been predicted to break the million mark over the next three years. This summer there were more than 600,000, according to Massachusetts research firm Forrester, a greater than 50 per cent increase on last year.

An example of a well-presented on-line brokerage service is Aufhauser & Company's WealthWEB (*www.aufhauser.com*), which gives instructions on opening an account and following the on-line quote and trading system.

Investors can access collated information from established catcb-all financial services sites such as Web Com Investors' Galleria (*www.webcom.com/ ˜galleria*) which also provides a mailing list service. It's very image-rich, so it takes a while to load properly, but it offers a good range of services.

Also available is the excellent Holt Report (*http://turnpike.net.metro/holt/index.html*), whicb provides a daily summary of leading indices for domestic US and overseas markets, as well as currency and precions metals prices. Holt includes a link to the NYSE quote server with a 15-minuta delay.

Tbe PAWWS Financial Network (*http:powws.secapl.com/top.html*) provides real-time quotes from AMEX, NYSE and NASDAQ, available to registered subscribers for a $50 monthly fee; while the Security APL quote server allows you to enter a quoted company's ticker symbol for a 15-minute delayed quote.

Reliability

The Massachusetts Institute of Technology's Artificial Intelligence Lab is providing experimental stock market data (*www.oi.mit.edu/stocks*), but webmaster Mark Torrance warns tbat tbe prices are "deemed reliable but never guaranteed."

And that seems to be a reasonable caveat to apply to any stock information gleaned via the Net. The quality of Internet services offered by the world's Stock Exchanges themselves is variable; thus, the following is offered as an interactive investor's brief guide to a selection of virtual bourses.

● AMEX: While their use of this particular domain name has probably upset a certain green charge card company, the American Stock Exchange (*www.amex.com*) was the first US exchange to go on the Web and the presentation is first-class. Its excellent Information Exchange feature gives a Dow Jones update every 30 seconds and the S&P500 Index with a 15-minute delay.

● AMSTERDAM: The Dutch exchange (*wwwaeb.econ.vu.nl*) presently includes a real-time view of the AEX index and links to delayed price information, as well as good details of Exchange activities.

● CHICAGO: The Chicago Board Options Exchange (*www.cboe.com*) and tbe Chicago Board of Trade (*www.cbot.com*) are both bighly user-friendly sites, easily navigated and information-ricb. The CBOE offers details – and even a free video – explaining LEAPS: Long-Term Equity AnticiPation Securities. The Chicago Mercantile Exchange (*www.interaccess.com/cme*) site looks great, and their 'Off the Ticker' feature offers daily settlement prices and intraday currency prices.

● FRANKFURT: Borse data are available via ARD/ZDF's teletext service, whicb you can access at *http://odin.csn.tu-chemnitz.de:9999/ARD/422/1*. Clicking on the DAX 100 figure takes you to the videotext index page.

● HONG KONG: Straigbt Hang Seng details, as well as closings and daily commentaries for other Asian markets are available at *www.asia-inc.com/lippo/index.html*

● JOHANNESBURG: The site of the Joburg Exchange (*http://africa.com/pages/jse/page1.htm*) gives searchable company information, spot price data, unit trusts and exchange rates; as well as a link to Investor Web (*www.investorweb.com*) which itself bas a great range of financial sources.

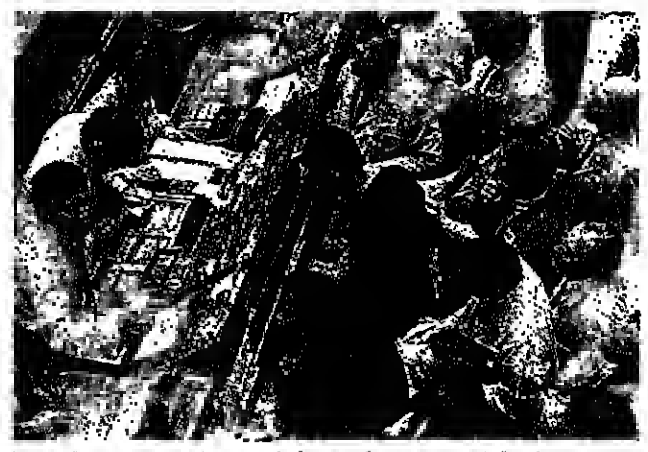
● LONDON: Tbe London International Financial Futures and Options Excbange (*www.liffe.com*) site does not entirely put visitors at their ease with a buge graphic and blaring disclaimer but once inside, the statistics page is pretty comprehensive – although there is a warning that the data files are on the large side.

● MOSCOW: The Russian Commodity and Raw Material Exchange (*www.fe.msk.ru/infomarket/rtsb/ewelcome.html*) is, as you might expect, rather basic, but it has a nice picture of the trading floor. Current quotes and market profiles are available, but in Russian only. Other Russian financial market details are at *http://mail.eskimo.com:S0/ ˜bwest/finance.thml*

● SYDNEY: Tbe Australian institution (*www.asx.com.ou*) has a helpful regional directory of Australian brokers, aod well-structured introductory information whicb assumes that not everyooe has used the Web extensively.

● WARSAW: The most basic of tbe lot – pure data; no grapbics, no fancy welcome pages, just a gopber to latest and previous quotations from *http://info.fuw.edu.pl/pl/gielda.eng.html*

● ZAGREB: The emerging Croatian exchange (*http://ksaver208.zse.com.hr/*) bas an experimental site whicb provides good comprehensive coverage of listed securities, daily activity reports and background information on local banking and financial legislation.



While dealers throng the crowded floor of the New York Stock Exchange, thousands of other market-watchers are able to track events from the comfort of their home office, via the Internet

■ Electronic data interchange

Report by John Kavanagh

Poised for big leap forward

The exchange of documents between computers run by trading partners is set to rise rapidly

A bugely diverse range of activities this year is making the electronic data interchange (EDI) community confident that next year could be one of explosive growth.

Hopes for "next year" have been raised for the last 10 years, but so many activities are now going on that users and service suppliers are cautiously predicting that 1996 could really turn out to be the definitive "next year".

EDI is the exchange of business documents such as orders, acknowledgements, delivery notes and invotces between computers run by trading partners. The messages are assembled into national or international standard formats by specialist software, so that computers at both ends can understand them. Messages are normally transmitted to a commercial network service, which directs them to rigbt destinations.

Companies can make immediate savings on the costs and time delays of paper-handling and eliminate errors which arise as data printed by one computer is keyed into another at the receiving end.

Bigger savings are made when EDI is introduced as part of a review of business processes. Manufacturing companies, for axample, can order parts literally "just in time": Nissan's UK factory transmits orders to nearby radiator and seat manufacturers just 45 minutes before tha components are needed on the assembly line. EDI has helped tha supermarket chain Tesco to re-organise its warehousing and distribution, cutting storage space, increasing selling space and gaining an almost threefold increase in stock turnrounds.

However, companies trading electronically are still in a minority. The UK, the biggest EDI community outside the US, has an estimated 10,000-14,000 serious users.

One barrier to tbe rapid take-up right across the private and public sectors bas been that EDI bas been largely ignored by the IT industry outside the specialist EDI software and network service suppliers.

Big usars hava tended to make tbe running, typically forcing their suppliers into electronic trading witb less than subtle suggestions about their continuation as suppliers if they do not fall into line. But these often smaller suppliers then face the problem and cost of getting software developed to convert incoming standard EDI messages into formats which can be understood by their business systems.

Tbeir alternative is to receive EDI messages using standard EDI software, then print the messages and key the data into their business systems in tbe right format. This clearly eliminates mucb of the benefit of EDI.

"In the UK, this action is referred to as 'EDI *interruptus*', or in the US as 'rip-and-read', as users grab material from the printer and then laboriously type it back into the computer system," comments Mr Bill Pugsley, managing director of Perwill, the Hampshire-based electronic commerce solutions provider to more than 60 countries. Industry estimates say that anything between 50 per cent and 80 per cent of EDI users are reduced to this stop-gap operating method.

In addition, a recent survey by the UK's Business and Accounting Software Developers' Association found that the number of companies in electronic trading would grow from 15 per cent to 35 per cent if only this integration and cost issue was resolved.

The issue has come much closer to resolution this year with announcements by leading business software suppliers of direct links from their packages into EDI.

The key announcements here have come from Sage and Multisoft, two of the biggest suppliers of accounting systems to small and medium-sized companies, and from Oracle, whicb this summer unveiled an EDI link as part of a big upgrade of its entire range of financial, manufacturing, distribution and persoonel packages.

The development was seen as so important that it was announced by chairman Larry Ellison, who said: "These new versions will belp customers lower costs and expand their businesses through the emerging areas of electronic commerce and sales force automation and data warehousing."

At the same time, SAP and Dun & Bradstreet are offering EDI links, working with specialist EDI software suppliers.

Sage'a experience witb its new EDI link could make other package suppliers take note. So far, it has won six new customers specifically because a link was available for its products and not on rival packages.

Meanwhile, two otber integration developments have taken off this year.

The UK's Business and *Accounting Software Developers'* Association is producing common data fields for its member companies so they can adapt their packages to automatically present the data needed for EDI messages. Again, five leading suppliers were involved initially, including Sage, Pegasus and Systems Union, and another 15 are now joining in.

The association is also co-operating with the EDI Association and tbe Tradanet User Group, representing users of Europe's biggest EDI service, to prodnce an application program interface which will provide a standard for links between business packages and EDI software.

"This is one of the most important things we are doing now," says EDI Association cbief execntive Gary Lyncb. "Integratioo has long been a barrier to EDI, especially at tbe small user end; this will make life a lot easier for users."

Another fledgling EDI Association scheme is also set to boost electronic trading, both by encouraging more companies to consider it and by expanding business for those already involved.

The association's proposed EDI Accreditation Scbeme will formally certify organisations' electronic trading ability. It will assess the performance of EDI users across Europe against a range of criteria which reflect best business practice.

The scbeme bas two assessment levels: Certified EDI User and Award for Excellence.

"To qualify as a Certified EDI User, an organisation has to be trading electronically with at least one other company using recognised EDI message standards," Mr Lyncb says. "It must also demonstrate a pro-active view regarding future EDI developments.

"To qualify for an Award for Excellence, a company has to show that as well as being an extensive user it has also reviewed its business processes and systems and bas firm plans for future expansion."

Companies could use tbeir certification in their marketing, across Europe. For as well as having entbusiastic support from the Associatioo of British Chambers of Commerce it is expected to get full endorsement from the European Commission soon. This is because the scheme fits in with the EDI Registration Authorities project, partly funded by the Commission, wbich aims to produce registers of EDI users.

The registers are designed to provide clear identification of EDI users, but a spin-off benefit is that they will also act as a form of Yellow Pages for companies seeking electronic trading partners.

Such initiatives, plus the role of the Internet in drawing attention to electronic working, have raised the EDI community's optimism about the future.

"The integration work now being dozen by business software suppliers means there's qolte a strong groundswell," says Ian Kilpatrick, managing director of EDI software specialist Wick Hill. "Next year could be wben we start to see really big business."

■ Impact of office automation

Report by David Lawson

Radical re-think on workspace

The challenge now is to find better ways to use costly office space


Canary Wharf: changing office technologies and working practices pose big questions

FT IT

Where we work

The impact of technology

Every image of future cities is dominated by towering glass needles. Office blocks are a symbol of drive, efficiency and technological prowess. But the futurists msy be wildly wrong.

Whisper softly to the masters of Canary Wharf, but the giant office building could be set for a slow but inevitable death. Changes in technology, work practices and society are plotting its extinction.

Firstly, office blocks in general are surprisingly inefficient. "About 60 per cent of the workspace is unused at any given time," says Barry Varcoe, international performance manager for Procord, tha facilities managemeot consultancy.

"Add the fact that the typical working week represents only 30 per cent of available time and this shows that in overall terms, offices tend to be only 12 per cent resource-efficieot."

Occupiers have only recently been made aware of this waste. Most tended to treat buildings as an inflexible cost, decided by market rents. But business has been forced by recession to re-appraiae outgoings. One solution has been to tender out oon-cora activities such as management of buildings. That brought in experts wbo are shattering old ideas about use of space.

Technology plays a crucial role in this reassessment. Most modern businesses now have a network computer on every desk – or soon will have. That means staff could use *any* computer rather than be tied to one position.

'Hot-desking' is creeping into the most unexpected areas. It is not just high-tech companies leading the way but consultancies such as Ernst & Young, Arthur Anderson and some forward-thinking advertising agencies.

The mobile phone bas yet to make a full impact. They are as common as a company car outside the office, but wby not within? Some pioneers already use programmable extension pbones, and staff settle in whichever chair or table decreed available that day (or hour) by the office manager.

The next step will be the cordless office, where phooes run oo ioternal wireless systems. Computers will also be linked in a similar way rather than through hard cabling – "the technology is already there," says Mr Varcoe. "It just oeeds to be exploited."

The same technology has taken work out of the office. Teleworking is rare in its purest form, where a large workforce works totally from home. But more people are spending days – or weeks – working oo their PC notebooks aod modems from botels and regional offices, as well as the occasional day at home.

A study by King Sturge found that 20 per cent of top companies already use some form of desk-sbaring, and another by Management Technology Associates predicts that advances in technology will make 60 per cent of jobs "teleworkahle" in the near future.

This all implies a more intensive use of offices. Firms will not need such large lumps of space to do the same joh. What's more, they will use it in different ways. Work practices are changing rapidly as organisations de-layer and become more flexible.

Space is no longer being allocated by status but by task, says Varcoe. Secretaries, for instance, are increasingly giveo more room than their managers.

Contracting-out non-core services releases large floors given over to drone-like administration tasks. Companies are boiling down to "thinkers and doers". They work in more relaxed conditions, often through informal mesting areas. So why have rows of fixed desks? They require the technology for presentation and display, for vidao and pbone conferencing, but this will be in different arrangements of space.

But is the vision of smaller, more comfortable offices, just as irrelevant as dreaming glass towers to the ordinary occupiar, who feels his mundane activities are unconnected to such high-tech wizardry?

Definitely not, says Varcoe. Every business should have these trends in the froot of their minds – "think of how quickly the PC has changed work patterns. The office of the future is almost here today."

Anyone considering new premises – or even renovation of an existing office – should go through the usual checklist of location, image and cost. But they need also start with some basic technology necessities and then try to envision what they may require in a few years.

"Of course, most will not know exactly what will be required. But that is the whole point. They should be looking for flexibility," says Varcoe.

In other words, an office should be capable of being changed around easily. While buildings have lifespans of decadea, interior services change. Office arrangements can be counted in months – or even weeks – as tasks changa and staff are 'churned'.

That can be a big problem, even in modern buildings. High-powered air-conditioning, for instance, is already under attack because office technology is progressively giving out less heat. That means paying for unused cooling capacity.

The shape of floors, position of windows and access to wiring are also vital for 'churning', requiring movement of desks, cables and partitions. The property industry fails its customers, because even modern buildings are often overpowered and too inflexible.

The challenge for the future will, therefore, not be to find space for gleaming glass towers, but to find ways of making existing ones work.

A tentant's checklist

Here is a checklist for the average potential office tenant. Apart from essentials such as a good location, robust structure and the right image, would-be tenants should look for the following basic points:

- ☐ Regular, modular walls and open floors with 3.5m to 4m beight, plus an ability to sub-divide, allowing for future changes.
- ☐ Vertical risers at least 5 per cent of floor space, to accommodate cabling.
- ☐ At least 75 per cent of usable floorspace should be within 5m of windnws.
- ☐ Local control of beating, lighting and ventilation, because staff will be moved around and will expect to influence their surroundings.
- ☐ Flexibility of tenure, rather than being locked into long leases.

Source: Procord

TRENDS The emergence of project-centred business venues

High tech office of tomorrow

Rnnning a snccesafnl basketball team can be a costly business wben the team is one side of the Atlantic and the coaches are on the other. A combination of new tecbnology and a fresb approach to workspaces came to the rescue of the Manchester Giants.

In the run-up to the current season they kept in touch by video-conferencing. Tactics were planned between studios at the World Trade Centre in Salford Quays, Manchester, and the owners' base in Indiana. This is one of a chain of a dozen units across Europe opened by Regus, one of the world's leading business centre operators.

The company insists that has already introduced the "office of tomorrow" by developing a concept more like an hotel than a traditional workplace. Serviced offices are not new, but have tended to be a fringe activity involving one-man operators requiring temporary space with receptionists.

These are still important: Regus offers a form of teleworking link through a personalised telephone answering service to occnpiers' homes or voice mailboxes. But extra layers of service are being added as larger companies are increasingly unwilling to commit themselves to fixed amounts of space over long periods. Business is moving towards project-centred activity, and this ebbs and flows, as does the number of staff involved.

Motorola, Coca Cola, Warner Bros and Digital are among tenants now using Regus centres for short-term activities. And because they demand the same high-level facilities as in traditional space, the landlord has raised its horizons.

Video-conferencing will be available in as many as 50 of its European business centres by the end of this year. This includes PictureTel's Concorde 4500 and Venue 2000 group systems and a plug-in kit for personal compnters called the Live PCS 50.

These provide access to more than 400 public studios in 27 countries through dial-up ISDN links similar to satellite technology bnt at 10 per cent nf the cost. Users book a room and line at around £95 per half-bour, plus the cost of transmission (usually aboot twice the cost of a normal phone call). Regus arranges all the bookings at the far end, makes test calls and sets up the contact, enabling users to walk in and talk.

Users have included internatinnal interviews by recrnitment consnltants Berkeley Scott and distance training by State Street Bank, where European staff gathered at the Regus centre in London to receive computer programs. Design consultant Wolff Olins also uses Regus to present graphic designs. A document camera can shows details of artwnrk, while another concentrates nn a person or group.

Some observers believe this kind of highly-served office will become the norm in the next century, with occupiers renting space literally by the hour rather than being burdened with long leases and responsibility for expensive non-core activities.

– David Lawson

■ Hot-desking

Report by David Lawson

No desk to call your own

Advancing technology has opened the door to far more flexible workspaces

Most office staff complain at some time about being tied to their desk. In future, however, they may not have one at all. Within a decade, technology coold free them to work in entirely different ways, sharing facilities and making mucb more intensive use of buildings.

"Hot-desking" is probably the most talked-about trend in office development. Some predict that breaking the link between staff and their desks could reduce space demands by as much as 25 per cent over the next couple of decades.

But this snazzy term oversimplifies the sea-change in the way some occupiers are using office space. There are half a dozen others ranging from "botelling", through "free addressing" to "virtual" offices. They all refer to different stages in the same revolution, where staff are freed in different degrees from their desks.

Desk-sharing involves staff losing their right to exclusive use of personal workspace. They may still have private lockers and pbone numbers which can be programmed into any extension. Files are sometimes centralised for automatic retrieval, or wheeled around in trolleys from one workspace to another.

Further along the spectrum, space is allocated for particular purposes: cellular for private meetings, lounges for informal ones, libraries for quiet work. But staff have no permanent station. In some of the most advanced experiments in the US and Sweden, even desks are folded away after use – and terminals pulled up into the ceiling.

All this could be a final chapter in the history of the cooventional office. Despite the domination of modern cities, it is a relatively short story. The familiar floors of regimented desks were introduced only earlier this century via "Taylorism" – a term used in management theory – as production-line techniques were imported from manufacturing.

Today's needs are much different, however. Many highly-skilled staff follow their own work schedules rather than uniform patterns. This often means being away from their desk for long periods, either in meetings or out of the office altogetber. New technology may have opened the door to flexible workspaces, but changing management techniques and the cost of sccommodatioo are seen as the real driving force. Even Digital, which uses the flexible office as a showroom for its technology, sees its role as a pioneer in a management revolution.

Every revolution requires a spark, however. That happened literally in Digital's case, following a fire requiring reorganisation of its Basingstoke centre. The company bad already found that balf the desks in the fire-wrecked premises were vacant at any one time, so it arranged in tbe replacement space to provide only 400 workstations for twice that number of staff. That cut space requirements from three buildings totalling 200,000 sq ft to one of just over half that size, which according to strategic investment manager Neil Harris is saving the company 2m a year.

IBM, one of the UK's larger space-users, is taking a similar axe to its property as part of a five-year plan to achieve a ratio of four people per desk. Its "trigger" was a squeeze on international profits.

But the message is also spreading to non-tecbnology businesses, particularly groups such as engineers and accountants whose staff are often away from the office. Andersen Consulting cut costs at its San Francisco headquarters by almost 75 per cent to $2,700 per person by reducing the number of cellular offices. Each now serves more than five consultants, according to a study by Frank Becker, a professor of facility planning at Cornell University.

Cost-cutting

But will sucb moves slow down as property costs stagnate? Unlikely, says Andrew Carter, administrative director for Ernst & Young. Cost-cutting will remain an imperative and new forms of flexible management also require different use of space. This ranges from home-working to near-conventional offices – "there's no single solution. It depends on the circumstances and corporate culture."

Digital has moved on from "flexible workspace" at Basingstoke to a "telecentre" in Newmarket. That involved substituting a 15,000 sq ft office with 1,200 sq ft in an existing warebouse. This has a mere eight secretaries and desks for 80 staff. Harris says the next stage is a "virtual office". He has already experimented with unataffed, computer-filled rooms in hotels, where consultants drop in to communicate with customers and colleagues.

But such changes are painful for staff used to their own desks and companies often have to wait for other "triggers" to hida the impact under the greater shock of reorganisation. The merger of Arthur Young and Ernst & Whinney, for instance, has led to a flurry of activity.

"Accountants are used to sharing rooms, but this provided the chance for further change," says Carter. "Hotelling" – where staff book desks – was introduced in Chicago's Sears Tower when the two firms merged offices, cutting space needs by 18 per cent.

Closer to home, this tecbnique is saving Ernst & Young rent and running costs of more than 400,000 a year in Leeds, where a 6,000 sq ft floor was made redundant. But it is important to think as mnch in terms of improving conditions as cutting costs, says Carter. So the money saved in Leeds is going towards installing air-conditioning for the benefit of staff.

In London, Ernst & Young bas twice as many ataff as desks in its 400,000 sq ft or so of space on two campuses around St Thomas's and Holborn. Here the system is slightly different, employing "free addressing", which does not involve a strict booking system. Any decision in future to relocate the headquarters could, however, see the "trigger" pulled again and staff could move one chapter further forward in the office revolution

CASE STUDY Space management

A shift of focus

Barclays Property Holdings was hived off the parent bank in 1991 to provide a market-led service for 1bn worth of premises. But this meant a fundamental change in corporate culture which led to a evolution in the way people worked, *writes David Lawson.*

"We bad to move away from the hierarchical structure of hanking into an entirely new field," says business and organisation development director Mike Mulholland. That involved "re-engineering" the whole organisation to focus on people, and led almost inevitably to a shake-up in work methods. The company'a beadquarters in Westwood Business Park, Coventry, are a showroom for the modern use of offices and technology.

"The concept is not hot-desking," insists Mulholland. The aim is much wider: to improve profitability by creating a variety of workspaces so staff can be most effective.

"We are able to create environments which enable people to be at their most effective. The typical workstation is not appropriate for the varied activities undertaken by most people."

Space is categorised for different functions. For instance, in certain areas staff deal with telephone calls and electronic mail. There are quiet sections for report-writing and reading, a library for research and reference and "combination" space for informal meetings. An office manager looks after bookings for more private space which is set aside for meetings, letter writing and administration. The manager is also part of a design team constantly looking at ways of improving the system. Secretaries are also responsible for time management.

The Westwood experiment evolved when a decision was made to move in an extra department of 50 staff. That meant making more intensive use of space, as the building was already full. An integrated new team of 70 now "reports to" 40 workstations. This means staff use just over 51 sq ft per person compared with the previous 127 sq ft.

A cooventional move, providing extra space for tha new staff would have cost 171,450 to fit out and another 200,000 a year in reot and overbeads. The current solution is a demonstration of the service BPH wants to sell to associates within Barclaya and to outside clients.

"We are developing a product by living and working in it," says Mulholland. Everyone is learning as they go along. For instance, there were early problems with telephooes, so these systems were replaced. Work patterns are also constantly analysed and new information fed back into the designs. More "combination" space has been allocated and private areas improved since the experiment started.

One of the key lessons learned is that these kinds of changes cannot be imposed on managers. They need to be 'sold' as they require re-appraisal of business culture, then re-engineering of activities, before moving on to space management.

CASE STUDY Working from home

Experiment in teleworking

Andrew Carter takes a day away from the office every six weeks to "get things done and do a bit of thinking."

Ernst & Young's director of administration is still in touch with his London office, bowever, as he is most evenings and weekends, logged in via a computer and phone line, *writes David Lawson.*

Carter is probably typical of a growing army of executives gradually slipping into teleworking as the technology – and acceptance of new working practices – develop. This year, Ernst & Young put 30 new phone lines into the Londoo headquarters for teleworkers and other centres around the UK are starting to offer staff similar facilities.

This is all part of a workplace revolution which some observers believe could add to the enormous surplus of office space already blighting Britain's cities. High-technology companies are leading the charge: IBM, for instance, sent its entire staff home to work in one US state, and Digital is experimenting with a mix of telaworking and desk-sharing.

Most large firms feel that a combination of apace-reorganisation and teleworking will cut property oeeds by as much as 25 per cent. Sceptics counter this by pointing out that managers in more mainstream businesses will dig in their heels against a scattering of staff.

Social and personal pressures are also used to defend the office. Carter admits that he could not do his job completely from home – "I have to meet and talk with people," he says.

But teleworking is playing a growing part in the transformation of office work. Many Ernst & Young staff already spent a good deal of time outside the office, particularly on the audit side. This has led to widespread desk-sharing, or "hot-desking" which has cut space demands in the partnerships'a buildings ranging from Nottingham to Chicago.

Advantages

In Leeds, desk-sharing is saving Ernst & Young rent and running costs of mora than £400,000 a year because it meant releasing a whole floor of a building. The London headquarters already has twice as many staff as desks, and a growing trend to teleworking will contribute to plans for aubstantial space-saving.

At one extreme are the Carters, ducking out to work in the quiet of their home study. At the other are some 60 working reduced bours, such as mothers caring for children. This trend will increase as women take a greater share of the job market – and become more assertive about holding onto their careers.

"It is all part of a progressive change rather than a big leap," says Carter. "We are pushing the boundaries to see what happens."

هكذا من الأصل

■ Product data management

Report by Philip Manchester

Expanding boundaries

Document management covers a vast area of activity in the IT arena

FT IT directions

document management

A precise definition of document management depends upon which area of the industry you come from. Manufacturing industry sees document management as a way to control computer-aided design (CAD) drawings and link them to production processes.

The finance sector, however, sees it as a way to keep track of original document images, such as loan applications, and how to tie them into electronically-generated data. Meanwhile, administrators of accounts see document management as a method of storing archive data such as invoices and customer statements.

"There has been some convergence on what document management means. Images are important – but not on their own. Companies want to keep track of all the electronic files they have," explains Mr Scott Kadlec, president of a leading US document management software supplier, PC Docs.

"Our view is that a document is anything that contains information that you need to access. The boundaries between different types of data are artificial and come from old methods of working," observes Mr Praj Patel, managing director of SoftCore, a UK company specialising in document management software.

"The important thing is distinguish between the document and its context. If you take an invoice, for example, it can be related to a customers or a specific project. Any document management system must be able to organise and index data so it can be put in different places," says Mr Patel.

Companies in the manufacturing sector have also recognised the confusion. Last month, a group of 30 software suppliers set up the Product Data Management/Engineering Document Management (PDM/EDM) forum to help resolve some of the problems.

"There are as many definitions as there are suppliers at the moment. One of the main tasks of the new forum is to define a common terminology. We also want to bring a wider understanding of the benefits that document management brings to business," explains Mr Geoff Hall, chairman of the PDM/EDM Forum.

Common threads run through all definitions of document management, however. Firstly, document management needs mechanisms to enter, store and manipulate information – whether it is in the form of an image, a technical drawing, a spreadsheet or a text comment.

Secondly, document management systems of all types share a single goal: to improve the flow of information around a business. Taken together, the diverse technologies which go to support document management represent a fast growing sector of the IT markat.

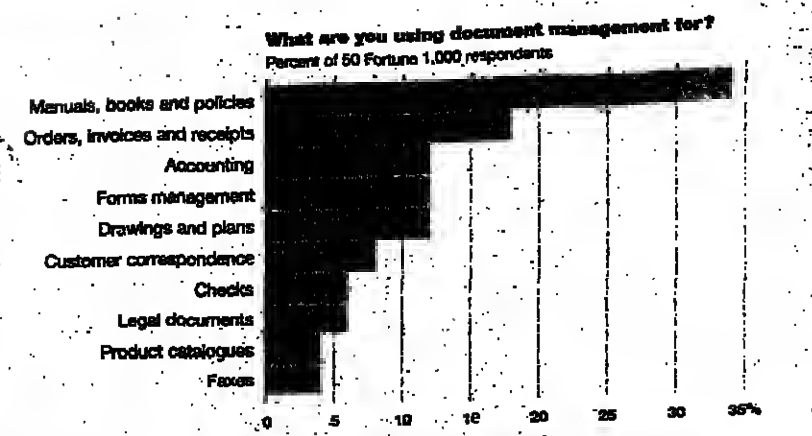
In the UK alone, the research company Wharton Information Systems estimates a market worth £700m by the end of tha decade from a base of £125m in 1994.

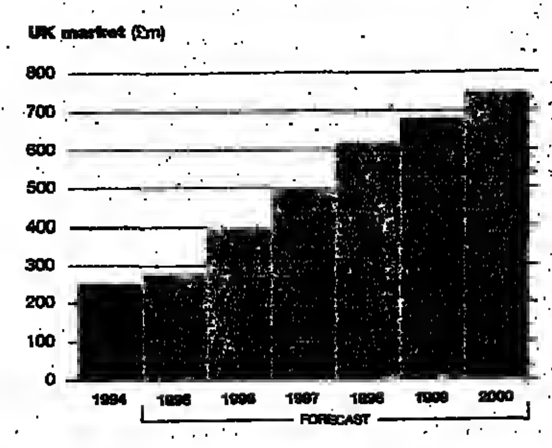
Activity among suppliers is high as vendors gear up for the expanding market. Bull, Wang and Microsoft announced the formation of "The Winning Partnership" in October aiming to bring their various areas of expertise together to exploit the opportunity offered by the expanding market.

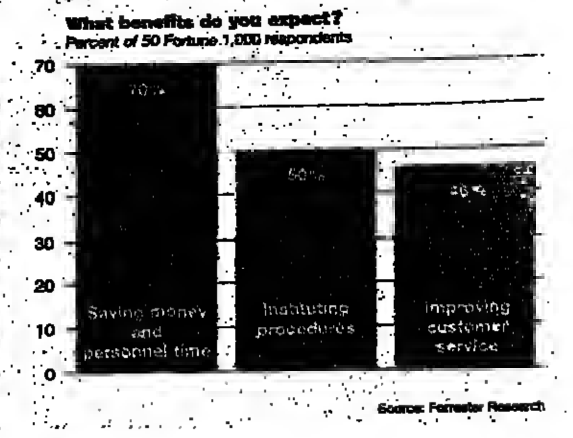
Earlier this year, the document management specialist, Documentnm struck a deal with database software supplier Informix; Novell signed a deal with leading document management company FileNet and Information Dimensions; yet another document management company, announced a 'strategic relationship' with the up-and-coming networking software company, Netscape.

Market growth is also being stimulated by advances in technology and the fall in the price of equipment and software. The increased power of desktop PCs, the spread of clieot/server networking and the fall in the price of image capture and storage equipment has opened the market to a much wider base.

"Imaging has definitely benefited from the lower cost of writeahle CD storage and scanning. Advances in processor power have also belped. But the most important factor is the increased power and lower cost of client/server technology," notes Mr Kadlec of PC Docs.







Mr Jerry Luckett, director of Xerox production systems at Rank Xerox UK, sees the growth in networking as another important factor: "Networks are one of the keys. They give companies the ability to transmit documents between locations. But we believe the focus should be less on the technology and more on enabling paople to do their job."

Mr Lnckett goes on to say that Xerox sees document management as the way to improve white-collar productivity: "We have discovered that white collar workers spend between 40 per cent and 60 per cent of their time working with documents.

"We also found that up to 15 per cent of corporate revenues go in the cost of document processing. Any savings that can be made will improve prodnctivity."

Xerox is one of many companies to see an important link between document management and the new vogue for so-called business process re-engineering.

Mr Luckett says that Xerox has spent the past five years looking at its internal documents and how they relate to business processes – "we counted 330 business processes with about 3,200 inputs and outputs. We also counted 2,900 unique documents. We reckon these numbers are typical for a large corporation.

"By eliminating the non-value-added steps in the process, we have rednced the time taken by 40 per cent and the costs 20 per cent."

The concepts behind business process re-engineering in the office have their roots in manufacturing industry. It is no surprise, therefore, tbat some of the most advanced document managament systems exist in a manufacturing context.

Mr John Jenkins, Kodak's business development manager for the European Insurance industry, says that this link is important: "Manufacturing has been about re-designing processes for many years – while in the office people have not looked at the whole process, until recently. Re-engineering around document management is one way of bringing the knowledge that is in the factory into the office," he explains.

Mr Mark Holmes, corporate communications manager for Computervision supports this view. But he goes on to say that the real key to successful use of document management lies in the application – "what you are trying to do is to get sub-sets of information from documents. But our background in applications shows us that it is the application which uses the information and you must be able to connect the two."

Tying document management to applications will also help companies to justify the cost of installing the equipment. The survey by Wharton Information Systems found that the lack of quantifiable benefits is the biggest obstacle to installing systems.

Microfilm still proves to be cost-effective

Computer output to microfilm meets a need in many areas of the world

Document management is a high-technology subject, but one of the most cost-effective options in the field ignores leading edge methods of storage in favour of 20-year-old microfilm technology, *writes Michael Dempsey*.

Computer output to microfilm, known as Com, is a speciality of the £41m MR Data Management Group. MR Data's 2,500 Com customers provide their information on a standard computer disk. The disk is then fed through a Com recorder to convert its contents into microfiche form. This takes place at one of nine centres dotted around the UK.

Com costs around 50 pence a master copy of microfiche and is rohust and easy to access. A fiche-reader is a relatively cheap device than any employee can master, hut document image processing is a far more advanced way of storing corporate data – one installation might cost a company as much as £1m.

The Com recorders used by MR Data are availahle for £500-£100,000, depending on requirements such as the need to store graphical images.

ICI Autocolor is part of the £1.7bn paints division of ICI. It maintains a database of 170,000 paint formulations used to create matching colours with damaged and overhauled vehicles.

Autocolor's international customer-hase is 30,000-strong, but many of these sites are distributors wbo, in turn, will relay paint formulations to local paint shops.

This impressive user community includes bigb tech workshops in the US and northern Europe, with PCs on the premises – but it also extends to body repair sbops in tropical climates, boused in open sheds. In the UK, the detailed formulation catalogue is maintained on an advanced computer database in Slough, although the tradesmen who consult the database to obtain details for paint mixes are spread around the globe.

David Evington, colour marketing manager at Autocolor, spends £300,000 on formulation distribution each year. Given tha size of his market, and the fact that every customer receives a revised 'paint list' five times a year, this is limited hudget.

Evington subscribes to MR Data's Com service. The paint formulation list arrives at MR Data in the form of computer files, and emerges on microfiche.

In the world of the paint shop, a fiche reader is the best delivery mechanism – "it's just so easy when you set up a new customer. There are no barriers in terms of cost or understanding. Fiche is desperately easy to explain," he says.

ICI Autocolor has not turned its back on the more glamorous solntions offered by the IT sector. The company has launched a CD-Rom-based bodyshop paint catalogue. But that service only makes sense in some sites across the US, Australia, France and the UK. It will never replace the robust and simple fiche reader.

Despite ceaseless pronouncements on the subject of technical standards, IT suppliers cannot match the mundane but reliable stock device that reads microfilmed data.

"We're an international business," Evington explains. "We have to use something that will apply in the most advanced bodyshop in New York – or even the most rudimentary garage in eastern Europe. For an international company to gain the benefits of being international, it's got to have uniformity of systems."

هكذا من الاصل

CASE STUDY **Document image processing speeds up documentation**

Wired-up for faster workflow

Intermortgage is the centralised mortgage processing arm of Barclays Bank in the UK. All paperwork relating to mortgage applications approved at the bank's branch levei is sent to Intermortgage's 800 staff in Leeds.

Barclays intends to honour a recent commitment to improve the turnaround time for mortgage applicants – it wants to ensure that an offer agreed at a local branch will be processed and turnad around by Leeds within 24 hours of the paperwork arriving. This target is part of a big attempt to improve customer-care at a time of renewed fierce competition in the UK mortgage market.

Parallel to this project, the bank aims to improve productivity. In Leeds, 265 cases a year are processed, but by March 1996, Barclays wants this figure raised to 400 cases a year. This is an ambitious increase, and document image processing (Dip) is the technology that the bank is relying on to deliver a result.

Optical disks provide the core storage facility at Leeds. Arranged in banks of up to 96 disks, these resembla 12in. long-playing records and are stored in machines known as video jukeboxes. One optical disk can store seven gigabytes of data.

This sounds impressive, but only makes sense in the real world when seven gigabytes is translated into 125,000 A4 images. Using two video 'jukeboxes', Intermortgage has created a network of terminals that allow its employees to access 6.5m images.

The processing power is provided by dedicated computer servers from IBM and Hewlett-Packard. This hardware, plus document imaging software from the US supplier, Filenet, cost Barclays £1.5m.

But storage and retrieval of documents is just the start of the Intermortgage plan: paper arrives at the imaging department and is scanned into the system and enters the world of workflow which uses technology to create a seamless and theoretically efficient business process.

Priorities

In Concert, a workflow software package from the Xsoft arm of Xerox, is Intermortgage's core workflow tool.

Getting the Leeds organisation wired into workflow, with electronic documents delivered automatically to desktop terminals cost £4.5m. With a spend of around £6m over three years, Barclays is clearly serious about imaging documents. Gordon Charlesworth, special projects manager for Intermortgage, sees this a long-term investment in productivity – "my role is to bridge the gap between IT and business. Technically speaking, I'm running an IT project, but in reality these types of project must be led by business priorities, not technology."

The fact of a 50 per cent rise in office prodnctivity must focus minds in Leeds. Barclays chose a business target and then set about implementing the technology to meet it.

If Charlesworth's mortgage underwriters are processing 400 cases a year within the next five months, the decision to ally document image processing to workflow will be amply justified.

Michael Dempsey

■ **Computer-aided drawings** Report by Nuala Moran

Safe in the electronic vault

How to gain easier access without endangering the integrity of CAD projects

Protecting computer-aided designs (CAD) from accidental deletions or unauthorised access may be relatively simple within the confines of a design centre.

But competitive pressures to bring a product to market means that CAD data often needs to be more widely available – both inside the organisation and to suppliers and customers. This makes management of CAD documents more difficult and business-critical: giving a customer the wrong version of a drawing could have serious repercussions.

In the UK, Ingersoll Dresser, the Gateshead Pump manufacturer, faced this problem when it decided to de-skill the drawing of customer installation and maintenance drawings.

"Wa decided to mova it from the drawing office to the front end of the organisation, giving responsibility to the staff who handle customer orders," says Colin Ruddick, engineering manager. The drawings, currently prepared on a three-dimensional CAD aystem, are complex and specialist engineering knowledge is needed to interpret them.

To reduce the skill levei required, and the time taken to generate the drawings, the company – which makes reciprocal and centrifugal pumps for the oil industry – is installing the Autocad 2D draughting system from the CAD software company, Autodesk.

In an in-house development Ingersoll has further simplified the 2D system by building a portfolio of standard, re-useable design elements which can be selected from a menu rather than having to be redrawn each time.

"As a result of moving this function, we had to set up a network so we could give the new users access to the CAD data," says Mr Ruddick. Although the company has a system for document management within tha drawing office, the decision to network meant it needed a central management storage system.

"We selected Autodesk Workcentre software to provide a secure database and the means to manage revisions of drawings," he adds.

Andy Dawson of Autodesk describes Workcentre as a 'electronic vault'. It can only be entered with a password, and when a drawing is taken out it. assigned to the person checking it out – "when the drawing is changed it isn't overwritten – instead, the new version is stored along with the previous one. People always get the latest version, but they know what revisions tba drawing has gone through."

He admits that storing avery version of a drawing is demanding in terms of storage space – "you can determine how many versions are kept in the vault, with a default option of five. After that, drawings are automatically 'put on the shelf' by downloading them to a archive storage".

Ingersoll bought the system to manage CAD documents, but Workcentre is giving the company the "opportunity to do much more than we were looking originally," says Mr Ruddick.

The company has decentralised the viewing and printing of drawings: rather than going to a central reprographic unit, users can view drawings on their desktop computers and print directly. It also allows Ingersoll's other manufacturing plants to come in and view drawings directly.

■ **Image processing in finance**

More security for legal papers

Keeping track of deals does not mean repeated trips to the filing cabinet

At Bankers Trust, image processing was brought in to improve the security of iegal documents. But it is now being used to reduce paper and streamline the management of documents relating to equity derivatives, options, and custodian agreements.

The system enables information to be found quickly and has resulted in significant cost and time savings.

Bankers Trust operates in the world's leading financial markets providing a comprehensive range of financing, risk managemant, fiduciary and fmds management, advisory and other services through its two main arms: Financial Services (FS) and Global Institutional Services. Among other activities, FS includes swaps and derivatives. The company has headquarters in New York, with offices in more than 50 countries worldwide.

Four years ago, the equity derivatives department in London realised that the only back-up it had for its legal documents was a paper copy. These documents (amounting to aboot 100,000 pages in all) include confirmations of deals – such as the purchase of options or swaps – and are signed by clients. They are legally enforceable in the event of a dispute, and also contain important trading information.

Equity derivatives are highly complex. They are contracts derived from a share or from an index of shares; rather than buying the share itself, the customer buys a swap or option on that share.

The document the customer signs contains vital details about the derivative. Bankers Trust knew that if the documents got lost – through a disaster such as a bomb or fire – it risked losing money: either from lacking evidence in a dispute; or from failing to sell a derivative at the right time.

It therefore decided that it needed a better back-up than a single paper copy – "we looked at varions options and chose image processing heceuse it gave us a legally enforceable back-up," says Stuart Robertson, vice president in charge of Bankers Trust's over-the-counter derivatives settlements.

In document image processing (Dip), paperwork is scanned into a computer system using a digitising scanner. The resulting image (including signatures and text) is displayed on a computer screen so that it can he checked for errors introduced by the scanning process. Once checked, the image is compressed and written to an optical disk. The disk is stored in a so-called "jukebox".

Althongh, no legal precedents have been established for the use of document images as evidence in court, "we're complying with the BSI standards for optical storage. We are using Worm (Write Once, Read Many) technology and our document images can't be changed," says Robertson. In addition, "we aren't throwing out the paper originals."

Robertson realised that image processing was expensive (the Bankers Trust's system is thought to have cost under £1m, exciuding staff time), but he felt the cost was justified. He comments: "You can't do a pure cost-justification, if the implication is that without tbe technology, you could potentially iose millions."

During the course of a year, Bankers Trust looked at a wide range of image processing systems. However, there were already Filenet systems within the company's New York offices (though not in the Financial Services arm) and it was emerging as the hank standard. A Filenet system was installed in Bankers Trust's London office in April 1994; FS staff in New York were given their own system earlier this year. Today, there are approximately 200 users in the UK, 150 in New York and 50 in other places, such as Toronto, Tokyo and Hong Kong.

From their PCs, they can book up to an IBM RS/6000 Unix computers which store the Fileoet software, and they can retrieve documents stored on 12in. optical disks from large jukeboxes.

Bankers Trust has extended the system in terms of how it stores and retrieves information. According to Graham Barrett, an assistant vice president at the company and also project manager of customer document management: "The Filenet system wasn't especially user-friendly, and we wanted to be able to retrieve information on a deal-folder basis or by the counter-party associated with the deal."

Small groups of users in equity derivatives, swaps and bond options (to which the system was extended this year) are responsible for scanning paper documents into the system. The originals are then shipped off site. A duplicate Filenet system has been set up at a separate site in London.

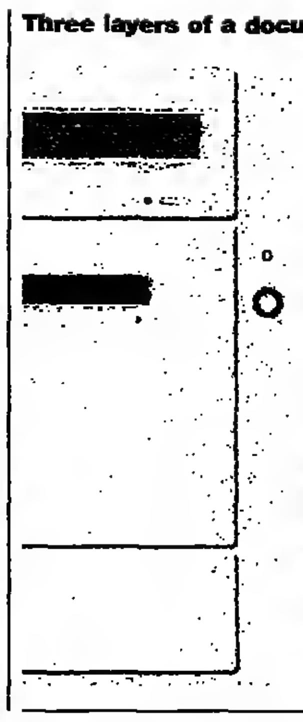
But the system is now seen as much more than a secure back-up for several bundred thousand pieces of paper. Marketing people and traders use it as a quick way of tracking down documents when they need to answer queries. As weil as deal confirmations, supporting information such as memos, electronic mail, Word (word-processing) and Excel (spreadsheet) files are stored in the system.

Bankers Trust has also developed a deal-tracking system using Microsoft's Visual Basic software. This takes information on deals from the company mainframe and checks that all the relevant legal documents are in the imaging system. It is used for equity derivatives over-the-counter trading.

Benefits of the system include: more security for legal documents – they cannot get mislaid; the ability for more than one person to look at a document at the same time; and global access to London-based images for US and Japanese FS staff.

Joia Shillingford

Three layers of a document management system



Applications

Create, view, and edit documents

Examples: *Product data management*
Document imaging
Technical publishing

Librarian

ORGANISATION

Build index database
Extract index information from document
Compound document linking

CONTROL

Security
Version control
Retention schedules
Authentication
Audit trails

Storage

Stores the documents
Examples: *Flat file systems*
Extended-relational systems
Object stores

Source: Forrester Research

■ IT and teacher-training

Report by Claire Gooding

A mind-shift in the classroom

Teaching the teachers could be the greatest issue facing the spread of information technology in education

Where children romp ahead in confident assumption that the machine will do their bidding, the average teacher is often still nervous of the computer, just as our great-grandparents were of their shiny new telephones.

"No country has yet solved this problem," says Dominic Savage, chief executive of British Educational Suppliers' Association (Besa), whose 220 members together account for £500m sales worldwide of educational software products.

"All countries need more investment in in-service training and IT training."

The Jason Project: in a partnership between private industry, scientific research groups, museums and educational institutions, EDS provides the IT services. The Jason project enables students around the world to take part in ambitious, live scientific explorations, via 'telepresence' link-ups

The World Conference for Computers in Education, held last July in Birmingham under the auspices of IFIPs, drew together 1,500 teachers from more than 50 countries. It gave them the chance to discuss latest IT methods and techniques, such as Integrated Learning Systems – widely used in the US to integrate management and marking methods with programmed learning – and to see multimedia and other products in the exhibition running alongside, organised by Besa.

These were the converted, the technophiles, only too eager to change and define what education will be like in the 21st century. While they valued the chance to compare notes with peers, these IT experts stressed that other non-IT teachers had so many pressures upon them that schools rarely have the time, money and resources to learn how to integrate IT into other subjects, according to the ideal now demanded by the UK National Curriculum.

Only those whose enthusiasm and training was sustained could boast of real success, and most admitted that integrating IT was usually done via the easy route, one expert teacher (the IT co-ordinator) teaching the techniques to childreo – and only then, (if they have time and resources) to teachers.

"The main problem in integrating IT-based work into the wider curriculum is that it demands expertise in a whole range of areas," comments Margaret Cox, senior lecturer in educational computing at Kings College London, who co-directed the UK government project 1989-91 on the impact of computers on children's learning.

"IT's major contributioo is to provide an environment in which children can create models of their understanding of the subject. The application of IT often reveals what the children do and don't understand. But it also demands that the teachers change their own role from being in 'information delivery mode' to collaborative mode: they have to become soul-mates of the children" she says.

This shift changes the fundamental relstionship between teacber pupil for the better, eccording to Mrs Ann Aston, IT co-ordinator and deputy head of the Robin Hood Primary School in Birmingham. "The teacher can't be the fount of all knowledge," she says. "IT is a valuable 'turn-on' in the process of learning, but itself moves so fast that we teachers have to share in the learning process. When the children see that you are a learner as well, it's like switching on a light.

"IT is good for confidence: it teaches them that they can do things for themselves – and it doesn't depend on academic aptitude. They can all be turned on to learning, once you've got that culture of teachers and children exploring together."

Those privileged to have a computer at home can start learning even earliar, and some nurseries have even adopted IT. Four-year-olds at Chelwood Nursery School in Lewisbam are already edept at using Apple Macintosh and CD-ROM products.

On show at WCCE were programs easily used hy pre-school, even toddler age children. Dr Ian Pardoe of Birmingham-based They Software was led into developing his First Forward programs, now on sale for PCs at £20 a time, for his own small children.

"I wanted them to be IT-literate from the start," he says, "because IT is now such an important element of education."

Software house Microsoft – a leading supplier to the education sector – bears out this gut feel with research among employers – "Microsoft products are so commonplace that school-leavers who have those skills will have an advantage in the commercial market-place," says Steve McMahon, business manager for higher education at Microsoft. "Employers say youngsters are instantly more valuable if they have computer skills."

Microsoft's research is put into a gloomy context hy Michael Fischer, chief axecutive of Research Machines, established as the leading supplier of PC-DOS based machines to the educational sactor. "Schools have spent £1bn on IT in the last decade, but, while we are the most computer literate of the G7 countries, only a half of one per cent of the total budget goes on IT, and the quality of IT teaching is still highly variable.

"Teachers don't get enough training time on the job, with only five days per year for total training needs: we give them very little further education, and they become isolated: equivalent professionals in business spend a lot more time on training."

In the US – held to be ahead of the UK in secondary education – there are intensive workshops for training teachers in IT. Mark Sealey, editor of Interactive, the new Birmingham-based IT publication for schools, has been tracking the progress of Apple's Classroom of Tomorrow research project (ACOT), an open-ended research project to assess the effect of IT in classrooms.

"It took five years for the emphasis to shift from watching tha effect on children to educating teachers, and expand into Teacher Development Centres," he says. Apple now has plans to set up several ACOT centres in Europe and the Pacific Rim.

If integrating IT with other skills is an acknowledged problem in the UK and US, then there is an uphill struggle facing countries less rich and technology-aware.

Wholehearted adoption of IT might enabla Singapore and Korea to leapfrog the west in many business areas, according to Dr Leslie Neal, senior lecturer in computer science at Brunel University.

By comparison, the UK government's strategy looks weak, he says – "there's a lot of exciting work going on at primary level, which is often lost in later transitions, partly because many teachers are terrified of IT".

Dr Neal is also involved in exchanges with eastern Europe in which skilled lecturers from Bulgaria, (whose work was geared to an economic model, now redundant) can learn modern information systems skills.

In Zimbabwe, tha early learning of English, the *lingua franca* of IT, is a help, hut there are few IT instructors to go around, explains Arthur Sithole, an IT field consultant who works for the Eastern and Southern African Management Institute – a sort of peripatetic management college.

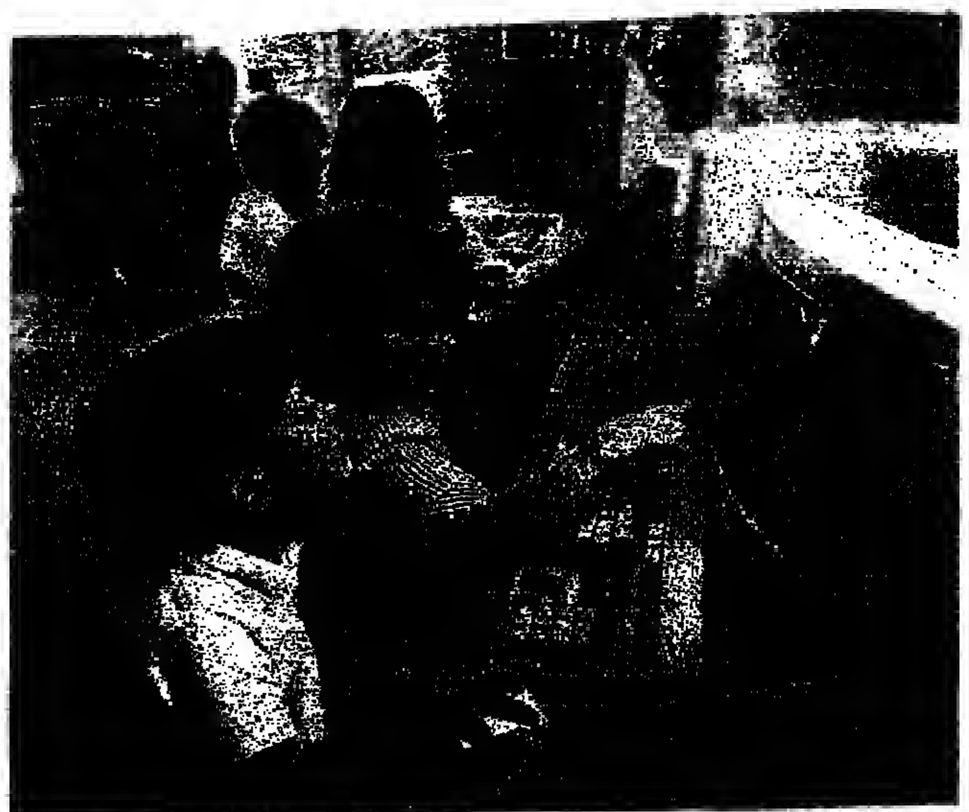
Zimbahwe's Manpower Development Fund is still identifying application areas for technology, and tha skills needed to fill the gaps. Some of the seven skills areas identified – data processing operations, and computer engineering – are still hardware-dependent, but there is an increasing recognition that applications skills are important.

There are now two teacher training colleges in Zimbabwe which offer courses for teachers to instruct IT in schools. As part of a four-year programme, the teacher gets an industry placement, and a chance to attend workshops on the use of commercial software packages.

If the Internet and CD-Roms are hailed as a way of opening up international education, it is an idea that should be welcomed with some caution, warns Professor Sandra Wills, director of educational media services at Wollongong University, outside Sydney, in New South Wales.

"For example, Australian children might get a US-based viaw of the world from CD-Roms, because the costs of preparing and distributing high-quality edncational materials on a global basis can only be financed hy global corporations."

It is an issue to whicb CD-ROM producers are already sensitive, producing versions in several languages. But for developing countries, the choice of software is an academic question of the most theoretical sort. Most cannot afford the hardware. The ratio of one compnter for every 10 pupils enjoyed in most UK secondary schools, (one to 18 in primary schools) is beyond their wildest ambitions.



Children using 'edutainment' products at school in a research project, funded by Sierra On-Line. The children are playing 'King's Quest' – more than 2m copies of the easy-to-use, cartoon-style game have been sold

■ Distance learning

Report by Claire Gooding

Lessons from Australia

The techniques developed can benefit those who must study in isolated areas

In Australia, the tyranny of distance has produced a culture where remote learning is common. Children isolated in the outback no longer crouch over pedal-powered radio, learning via "The School of tha Air." Television, telephony and electronic-mail mean that their teachers can now take lessons from anywhere in tha world.

Partly because 'distance learning' is part of the Australian mentality, the government created the Open Learning Agency, to centralise expertise on remote learning. In each state, one or two universities were licensed to conduct distance education, and they have come together in a strategic partnership to share skills. The techniques developed can benefit anyone whose studies have to taka place remotely, whether because of location (such as on a ship) or because of domestic commitments.

At Deakin University, e designated centre of expertise for the state of Victoria, students share a 'bulletin board' so that they can work collaboratively, each sharing a common

Continued on facing page

هكذا من الاصل

■ The Internet — Report by Claire Gooding

Surfing the Net at an early age

The Internet can be used for educational applications from primary and secondary to university levels

Ten-year-old Tony Varas likes comic books, computer animation and video games, and even some real sport. He is a pupil at the Ralph Bunche school in Harlem, and if you wanted to know more, you could look at some of his drawings on the Internet.

Intertalk – giving access to Tony's page – was one of several Internet tools on display at the World Conference on Computing in Education, held in Birmingham UK, in July. It was shown by Cambridge-based Acorn Computer Group, one of the leading educational suppliers in the UK, and provider of several Internet gateways including public domain tools such as *Arcweb*.

There are yet more tools, such as *Annweb*, on the way, all designed to make it easy to navigate the Internet. Internet usege is spreading downstream. In higher education, students have for generations been using *Janet*, the academic network, to swap text messages, but the Internet is now for primary and secondary schools as well.

Increasingly, schools and suppliers use the Internet like an electronic mail hulletinboard, to display information about themselves. In the US, Microsoft launched the K-12 home page on the worldwide web. It provides look-up pages of technical information for users. In the UK, another leading educational supplier, Research Machines, had 2,000 subscribers by September and has launched its electronic service for learning and teaching, CampusWorld.

The Internet's novelty value might mean that school users discover more about a peer group of computer users on the other side of the world, such as Tony, than they do about the people on the other side of the tracks in their own town.

Nevertheless, the Internet is a promising educational tool according to Mr Sam Wauchope, managing director of Acorn Computer Group. But as yet, he says, "There are few real applications, and the tools which will really open it up – speech recognition, automatic translation, and even simple navigational aids – are not in place. It's a technology of vast potential, but the potential isn't yet exploited. It's a springboard, and as with any valuable new tool, people are concerned about pitfalls and dangers, such as misuse and security."

Although by providing Internet tools, companies such as Acorn, Microsoft and others claim to be giving an entry level into edncation on a worldwide basis, Mr Wauchopa's comments underline something many Internet enthusiasts are relnctant to admit. The Internet is, as yet, a tool for the privileged, those who have ready access to compnting, and a reasonable command of English.

The vested interests of large global organisations hava also made some edocationalists uneasy. "There is a danger that in the globalisation of education, we might lose regional identity," warns Prof. Sanrdra Wills, director of educational media services at Wollongong University, Australia. "It's one of the big issnes of education in the 21st century: the costs in preparing and distributing high-quality educational materials on a global basis will concentrate the packaging of knowledge in the hands the few, and in commercial rather than academic hands, too."

Making the Internet more accessible, but also local and regional is one of the avowed aims of the Surrey Internet Project, which connects 90 educational institutions at all levels. It is directed by Colin Masters, an adviser for Surrey County Council Education Services.

"We're keen to have a community which makes local links as well as to the wider world," he aays. "The main aim is to build the skills for coping with technological change that employers at all levels will demand in future."

Similar initiatives are now coming from government and commercial companies, such as Link, the vocational training company which has set up multimedia training centres with schools and universities in Northumberland and Merseyside. Most recent is the Schools Online Project, funded by the Department of Trade and Industry to bring 60 secondary schools online, supported ond sponsored by 20 IT companies including ICL, IBM, Research Machines, Acorn, Oracle and Motorola.

☐ *Contact: BT Campusworld, tel 01345 626253*

Schoolboys explore the marvels of information technology: the Internet has promising educational applications, if used with care, but the potential has yet to be exploited. School applications are now mainly limited to e-mail

■ Software development — Report by Geoffrey Wheelwright

Global perspectives emerge

New programs allow children to 'discover' information

While the purchase of computers in education – in the western world, especially – seems to have become something of a holy grail for many parents, schools, local authorities and government departments, the question of which educational software is to be used on those computers had, until recently, been lost in the rush to acquire the latest and greatest hardware from the best national supplier.

Nationalist politics, for example, have played a key role in the evolution of educational software in schoole. Even the most conservative-minded of governments appear to bave been hell-bent on a strongly interventionist policles where classroom use of computers was concerned.

It all started in the early 1980s with the design and sale of Acorns original BBC Microcomputer to schools all over the UK. Acorn was supposed to be the British answer to Apple and, in fact, its original BBC Micro provided many of the same kinds of facilities as the original Apple II and encouraged its users to learn compnter programming in the BASIC programming language.

This choice impacted heavily on the types of educational software that were developed for schools. It immediately limited the choice of educational software produced elsewhere in the world. In the US, for example, it was the Apple II that stormed the schools and universities in the early 1980s – so UK schools with BBC Micro systems were unable to take advantage of the wealth of software that the popularity of Apple II produced.

The UK was not alone in this policy. In France, Italy, Japan and many other countries, there was a clear policy in the early part of the last decade to use locally-produced – usually proprietary – computer systems in the national school systems.

The arrival of Apple's Macintosh in the mid-1980s started to change all that. Governments and educational anthorities gradually relaxed their commitment to home-grown, proprietary eyatems and Apple pushed heavily into many European educational markets. This, in turn, encouraged software developers in the educational market to develop more of a global perspective.

There was also a move away from using dedicated "education" software in the classroom. Both parents and educators seemed to take on-board the idea that students should get comfortable using standard office software to do their computer-based work in the classroom. As a result, atandard spreadsheet software began appearing in the science lab, word-processing software was used to write compositions and database applications were being used by stndents and administrators alike.

This approach has become so pervasive that software giant Microsoft's popular business package – Microsoft Office – was recently voted by the UK National Association for Co-ordinatora and Teachers of IT (ACITT) as the best general purpose software package in primary and secondary schools.

"As IT becomes increasingly integrated into the national curriculum, teechers are looking for tools which will help them introduce computer technology to the classroom," commented Martin Kilkle, chairman of ACITT, at the awards announcemant. "For example, the children can use Microsoft Word in the preparation of written work: they can use Microsoft Excel to produce graphs and charts of rainfall rates in geography or chemical reactions in chemistry.

There is now a move back towards software that is designed specifically to educate. Now that the prica of computers with sound, video and CD-Rom capabilities has come down considerably – and are selling in high volumes – some really innovative educational applications are coming to the fore.

The most prominent of these is the CD-Rom-based encyclopedia. Most of the leading software houses that participate in the educational and home market now offer on-line versions of reference works.

A wide variety of popular "simulation" applications are also becoming popular – which use animation, music, sound effects, narration and all kinds of engaging characters as "guides" to simnlata a trip through the solar system, the human body, under the ocean or even the construction of a big city. These are also increasingly being used for classroom instruction as they provide ways of letting children "discover" information – rather than simply giving it to them as text on the computer screen.

■ Multimedia in schools — Report by Claire Gooding

A shift in emphasis

There is growing use of multimedia systems as creative tools in the classroom

A book still has several advantages over a computer: it is infinitely more portable and less costly. Yet multimedia presentations offer the seduction of having pictures, sound, text and video clips to make subjects "come alive."

More recent offerings go beyond the singing-and-dancing book, to teach children things that cannot be learnt from reading alone (via page or screen), such as creativity and collaboration.

Here is the real potential of multimedia: not in the passive absorption of information, but in the creation of it. Every attempt to use computers in ednсation – right back to the earliest experiments in the 1960s – has involved decision-making, often asking multiple-choice questions from a menu. The new wave of do-it-yourself multimedia tools demand much more active participation. The idea is not only that teachers should be able to direct and create their own multimedia exercises, but that pupils should, too.

"There has been a real move from passive consumption to active creation," says Phil Hemmings, educational marketing manager multimedia at Apple Compnter. "There are very good tools for children to create their own multimedia presentations: for instance they might draw on *Kid Pixs*, record on the microphone, then sequence the pictures for presentation.

"One Humberside school, for example, did a group presentation of a story which involved real teamwork. The IT tools were only one element: they needed different skills for the creation of images, art and design, writing and speaking of script."

Mr Hemmings sees the rise in this use of multimedia as a significant hoost to Apple's share of the market in edncation, because so many of the features needed for authoring – as opposed to mere playing – are included in the build and price of its Macintosh and Performa computers.

This shift in emphasis is endorsed by the National Council for Education Technology. (NCET is the UK government body funded by the Department for Education and Employment to promote the use of technology in education).

For example, a *Guide to Islam*, written and produced by Brook House County Primary school in Blackburn, was one of the winners of NCET's National Educational Multimedia Awards, (8-11 years category) recently presented at the World Conference for Computers in Education at Birmingham. The entries from 110 schools went from under-sevens right np to 18-year-olds.

The NCET is also encouraging schools to integrate IT more fully into other subjects across the curriculum. Interactive multimedie seems to adapt to artistic and creative subjects readily: less so to scientific and mathematical oncs. Biology is the exception, with such products as Gold Disc's *Astound* enabling teachers to create their own presentations, and build in a degree of interactivity.

A lot of work is being done at primary as well as secondary schools, where the emphasis is to use IT to spark the ability and creativity of children regardless of age, ability, or background. A £5m DfEE grant in January this year has belped, the main suppliers being Research Machines, Acorn and Apple.

Eardley Primary School in Wandsworth, South London, uses a range of Microsoft tools such as Encarta and Ancient Lands, closely integrated into the entire curriculum.

"Our bead, Christopher Davies, is very enthusiastic," says Mrs Tracy Buckley, IT co-ordinator for the school. "We amalgamated infants and juniors about two years ago, and when he arrived, he saw it as beneficial to the education of all the children."

■ Special needs — Report by Claire Gooding

Help where it is most needed

The computer can be a great help for children who need to explore and learn at their own special pace

No one watching Debbie could doubt that the computer is a great aid to both concentration and motivation. A pretty blonde 15-year-old, ear-rings glinting under the headphones, she whizzes between games and multimedia displays in a demonstration of confidence and aptitude. Her classmate Richard is just as adept, although the computer isn't his first choice of activity, as it is Debbie's.

Debbie and Richard are two of three Downs Syndrome children in a class of seven 14 and 15-year-olds at Vinio House School, in High Wycombe, Bucks. Alec Gardner, their teacher, is also IT co-ordinator for the school and he stresses that, although leas able and more withdrawn, the other pupils in the class also get a great deal from the computer.

"Few of onr children will ever be able to read," he says. "Bnt we've deliberately set things up so that they can do other things, entirely on their own."

Special schools such as Vinio House teach children with severe learning difficulties, who in many cases will never be able to read or write. For them the computer is invaluable for the usual classroom reasons – one-to-one interactive learning – but it also enables some children to communicate as never before.

"All too often, these children have things dona for them. This enables them to do something on their own, and they get so much more of a buzz from that. The compnter is almost like an extra member of ataff aometimes," aays Mr Gardner. "It improves co-ordination, anables choices, and teachea them about making decisions, and it also encourages responsibility, as they do realise how valuable the equipment is."

Even Nicole, an electiva mute with micro-encephaly, severe learning difficulty, and epilepsy, loves to play tha *Touch Funfair* game from Brilliant Computing. Items (including her favourita halloons) appear out of a barrel, with appropriate noises.

Many of the children rely for communication on a form of sign language, which is both signed and written, known as Makaton or (from the same roots but not proprietary), Rebus. A special symbol overlay on the keyboard, from Concept Keyboard Company of Winchester, enables all, including wheelchair-bound children with physical difficulties, to get a direct response from the compnter, and use it to communicate via symbols.

Vinio House, like all UK schools, has to respond to the need to integrate IT into its everyday curriculum, following guidelines suggested by the NCET (National Council for Edncation Technology). Its policy is that every teacher has to be aware of tha software available, and the aim is that pupils "progress from being spectator to participant to creator". One of Mr Gardner's holiday tasks is to write a guida for his colleagues.

Programs such as *First Steps* from Brilliant Software of Bradford can be adapted to set up different "switches" for responses. Using *Writing With Symbols*, a Rebus symbol program with voice simulation from Widget Software of Leamington Spa, Mr Gardner has been able to prodnce work sheets for class-work, and signs for general use in the school such as "Now wash your hands," and library reminders.

There are many specialist suppliers and "virtual reality" is making the tools even more powerful. Rompa now sells *Makaton Live*, the virtual reality teaching aid for signing, which last year won the Business Software Challenge for atudents (sponsored hy Computer Associates and FT-IT).

At Vinio House, Mr Gardner is inundated with brochures from Semerc, Rompa, and other suppliers. With a total IT hudget of £1,300 annually, he can't buy all he'd like, but his computer, with voice-simulation, was the first of five that the school has acquired in the past year. "People are beginning to realise how valuable the computer is in our work, bnt finance is still a limitation," he concludes.

☐ *Contacts: Richard Eastgate, Mirabelle d'Cruz, Dr Dave Broum, Nottingham, VIRART: virtuol reality 0115 95140 4001602 515151. Widgit: 01926 885303. Brilliant: 0274 497617.*

Australia to host 'Teleteaching 96'

Continued from previous page:

directory in the University's computer. The university was selected by the Commonwealth Government as its leading University of the Year in 1995, specifically on the basis of its IT support to students: 14,000 of its 26,000 students are off-campus.

"When a student enrolls at Deakin, we don't care where you live, or whether you come to classes: you are a student. If you opt not to study face-to-face, then you can access your tutor by e-mail," says Professor Peter Juliff, head of the University's School of Management Information Services, who has been involved in distance learning (including print, TV, audio and multimedia) for 20 years.

"We've been working off-campus by e-mail for five or six years now, and studente in Malaysia and Singapore routinely submit their essays via e-mail, using PC and modem."

The university has its own print-shop and design resource, all held electronically and updated annually, so that any course can be run remotely, from undergraduate to post-graduate (including MBA, which is only offered as an off-campus course). Deakin segments staff into those looking after mainly distance, or face-to-face students in any one semester, so that tutors only have one mode of delivery to worry about at a time.

Keeping the class in step is one of the problems of distance studying. "Off-campus students tend to work at thair own pace," says Professor Juliff. "It is a problem keaping track. You can't see students looking bemused, and if someona hasn't submitted work it may mean he's eick, or away. Tutors have to give deadlines, because soma people are convinced – quite wrongly – that they'll catch up at the end of the course. So we work hard to get a measured input, for their own good."

It is fitting that Australia, with its history of distance learning should be host to a "Teleteaching" conference, the first of such a scale attempted worldwide. "Teleteaching 96 is practising what wa preach," says its organiser, Professor Sandra Wills, director of educational media services at Wollongong University, ontside Sydney in New South Wales. "The tools we have now give us the potential for a much more global education system where learners can tap into expertise when they hava a need for it, via international communications."

The main activities will take place between September 2 and 6 next year, around Canberra, where 200 of the Teleteaching delegates will be attending the biennial IFIPs international educational conference. The idea is to link them with a simultaneous workshop in Vienna, into which individuals elsewhere can "eavesdrop" and interact from home.

"The principle of distance education is that you are not restricted to dates and places, so there are activities leading up to it and following those dates," explains Prof. Wills. The conference will use the Internet and all other technologies used in distance ednсation: broadcast television, interactive television, radio, Internet, videoconferencing, and CD-Rom.

☐ *Contacts: Teleteaching 96: (Fax only) 00 61 42 258 312. E-mail: s.wills@UoW.edu.ou Deokin University: pjuliff@deakin.edu.au*

■ Systems for sales and marketing

Report by Claire Gooding

A difficult sell to the sales staff

Sales and marketing are ripe for computerisation, but sales people are often unsure of what they really need – and off-the-shelf software 'solutions' can prove to be a poor fit

FT IT software at work

Sales and marketing

In the customer-focused 1990s, companies should be queueing up for sales and marketing systems. But, of all customers, sales and marketing people can be the worst at knowing what software solutions they really need.

For the individual sales person, tha database surely ought to be an answer to prayer, allowing him or her to follow up calls and store the personal information that helps build the all-important 'relationship'.

For the marketing department, a computer system can store all the valuable information that might otherwise disappear when a sales person leaves.

The 'data warehouse' takes events a stage further for the company, creating an overall picture for analysis by drawing data from all over the organisation, including related operational systems such as logistics, supply and distribntion, and accounts.

Such a tool could provide a powerful overview of customers for trend analysis, reporting on everything from the profitability of the account in the past, to what the customer is likely to need in the future.

It is a persuasive argument in favour of information technology as an 'enterprise-wide' aid, and one that many IT companies are using to enter an already busy market. Over the last few years, famous names sucb as Logica, Sema and Andersen Consulting have joined the fray, along witb other software companies with diversa backgrounds in data reporting tools, executive information systems, databases, service bureaus and consultancy.

Tbey compete with the 'niche' companies whose package offerings still characterise the market: there are lots of small fish in this pond, but no clear market leader. Some pioneers have disappeared. Others have fared better, such as Telemagic, owned by the UK accounting software supplier Sage since 1992.

In Britain, 60 companies are currently preparing tbair stands for the 'Softworld in Sales and Marketing' exhibition at the Ramada Hotel, Heathrow. Now in its fifth year, the organisers, Softworld, expect the event to attract 2,000 visitors over two daya from Novamber 14-15. The three main areas of tha event are marketing applications, integrated solutions and sales management.

Despite the breadth of offerings in the sales and marketing arena, some well-documented tensions lie beneath the surface of this apparently ideal subject for IT.

Leaving aside the tension that often exists between core 'operational' concerns, and those of sales and marketing, there is a further dichotomy concealed by lumping 'sales and marketing' together in one category.

Priorities in sales rarely match those of marketing. This is the point made by Chris Gater, chief executive of Cirencester-based company, Brann, whose Viper analysis tools are used in direct marketing to analyse vast amounts of data for strategic decision-making.

"You have to start with the business analysis, and think of lt atrategically. The analysis highlights issues that transcend departmental boundaries and affect the entire enterprise, not just those that pertain purely to sales or marketing," he says.

"Organisations have to work out who 'owns' the customer before they decide who 'owns' the data – and that isn't clear in many companies."

Even when the internal lssues bave been resolved, sales people are themselves critical customers, difficult to convince. They want to learn more about their own customers, but dislike sbaring information.

They are also innately optimistic, and believe that every process can be improved, according to consultant Wendy Hewson, whose company Hewson Consulting carried out research commissioned in tandem with tha Softworld Show.

"That might explain why 95 per cent of the 111 participants in our survey believe they are not getting the best out of their systems," she says. The new Softworld research also identified other barriers to the successful usa of compnterised sales and marketing systems.

They include the long-term nature of the benefits, linked to high costs – sales people expect a quick payback on investment – and lack of motivation by key figures in the company. International support can be a problem, as few of the suppliers are large enough to satisfy the pan-European demands of large customers: the bright innovators tend to lack critical mass. The complexity of implementation also bothered more than half the respondents. Anyone wbo thinks that an off-the-shelf solution is something that will be a perfect fit, straight off, is in for a disappointment.

"What seems to have changed is that there are more short-term pressures, and people are even more frustrated by tha effort it takes to get systems up and working," says Bob Shaw, a sales and marketing consultant and author of several books and reports on database marketing in the last 15 years. "I can safely say that if a job goes out to tender and auppliers are asked to structure the costs appropriately, the licence is rarely more than 20 per cent of the cost."

The recent fashion for 'business process re-engineering' or BPR, tends to be technically driven, and the barriers between sales and marketing, and other activities loom large, he says. "You find pockets of activity, and re-engineering gets them to work barmoniously together . . . In practice, the inter-departmental politics are difficult to manage: I spend a lot of my time negotiating cross-departmental agreements."

People have to see the benefits to make them realise why they have to change – "they have to be frightened of merely staying the way they are: it's an emotional issue."

Hewson Consulting bas formed the Mercatus research 'club' of 300 user-companies, to try and work out practical answers to the questions raised by the Softworld research. Early Mercatus research is concerned with 'systemising' the sales process – "it's still a mystery, compared with the processes for accounting," says Ms Hewson.

Planned workshops will concentrate on team-based planning, relationship planning, and rapid systems development. These problems have to be resolved even in the case of large-scale, well-integrated solutions – for example, from suppliers snch as Sage and SAP, which are prlmarily sources of accounts packages.

The suppliers of solntions often understand the strife better than internal IT departments. John Bryant, managing director of systems supplier Tranzline, whose systems work across the enterprise, echoes the experts: "Technical snpport ls, of course, important – bnt not enongb. Introducing a sales and marketing system is not just a technology issue, it is about managing disparate groups of people from IT, sales and marketing, and bringing them together to make sure the systems are set up to solve business problems."

Technology is rarely the answer on its own, according to Mr Shaw: "In my experience, the problems the companies face have less to do with the technology than they do with the agreements within the business. People see things from different viewpoints, and unless you can get that agreement, the project is doomed."

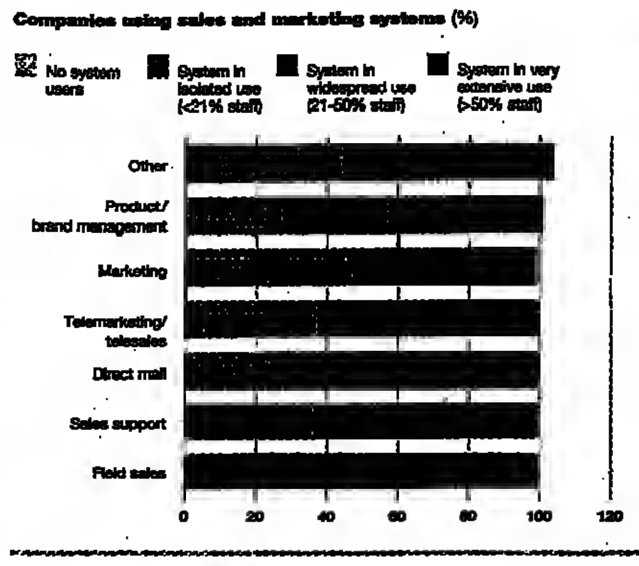
Competence is rarely to blame, he says. External customer commitments cause competing internal commitments within the organisation. He cites tbe utilities – gas, telephone services, for exampla – as a good warning of how arguments arise between different departments who all have different views of the customer.

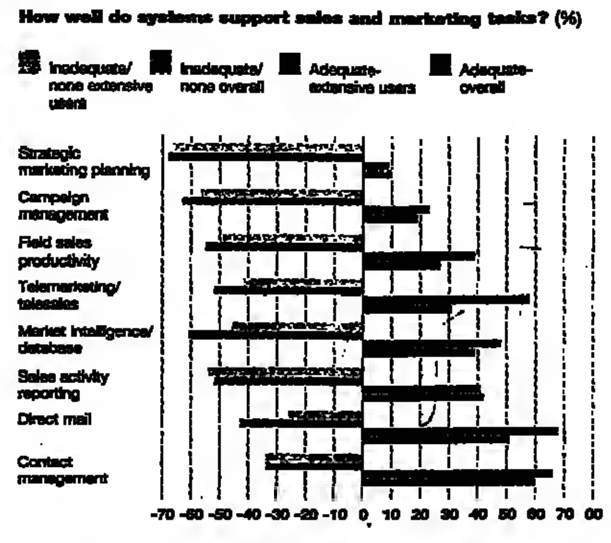
"When you try to operate something that works with all of them, the IT team can't pin down exactly what they should do, and that's how projects run for years and years, and never complete."

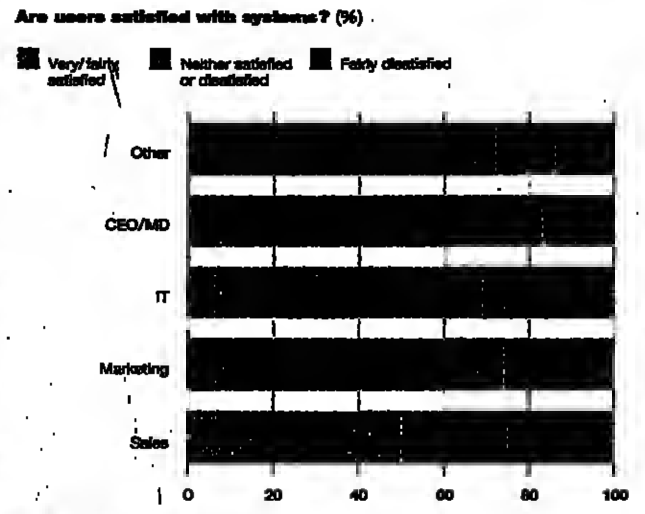
Brann's Chris Gater suggests that the conflict can sometimes be resolved with a new structure: the appointment of a new 'customer-relationship manager' whose role crosses traditional product and territory boundaries, and might suggest new approaches to distribution and resellers – "in the case of Daiwoo, selling cars, and Direct Line, selling insurance, or the bank First Direct they've solved the dilemma neatly by doing away with distribution cbannels completely".

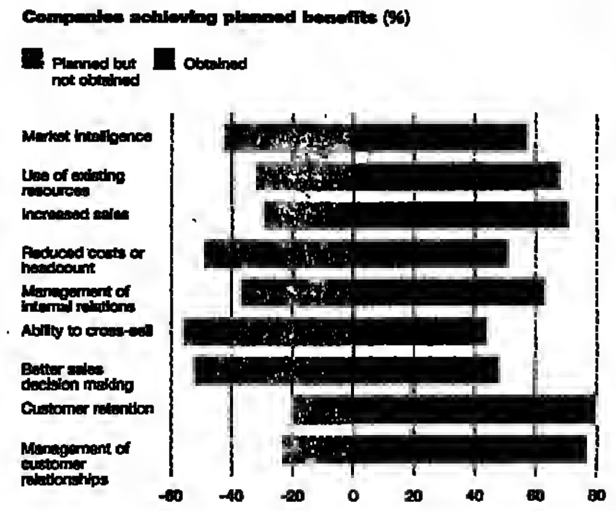
Direct marketing systems can evolve to sales and marketing systems, to customer service, through to finance and operations, be says – "it might be the only place where a company keeps all its customer information".

'Softworld in Sales and Marketing,' contact Interactive Exhibitions, tel +44 (0)181 541 5040, fax +44 (0)181









Source: Hewson Consulting for Softworld

■ Drug industry application

Oxygen helps to boost sales

Even users who first feared computers have now been won over by the benefits

The pharmaceutical company Sanofl Winthrop chose Oxygen, a software package from Integrated Sales Systems (ISS), to enabla it to decentralise its UK sales and marketing operations.

This contract with an international manufacturer was an lmportant win for the five year-old London-hased software vendor. Sanofi Winthrop, owned by the French petrol company Elf, is one of the leading vendors of prescription pharmaceutical products to hospitals, pharmacists and doctors.

Ms Barbara Awbery, its sales services manager, who was in charge of the project, says that Oxygen has helped it to go part of the way towards delegating responsibility to local sales teams to run their own territories.

"Regional managers now have very powerful analytical tools to enable them target their sales efforts more effectively," she says. The decentralisation strategy should be completed around the end of next year.

At the same time, Oxygen has created a complete and up-to-date corporate database of customer information and sales and marketing information for the first time.

The company believes that with the help of ISS it now has one of the most sophisticated sales and marketing management system in the pharmaceutical industry.

Ms Awbery said that wben they first began investigating territory management systems in 1991 nothing they looked at could give them what they needed. To justify the investment tbe system bad to improve significantly on the old paper-based systems.

"We wanted something a bit different to what other pharmaceutical companies used," she says. "Most go for a burean service, with other people managing the data for the sales representatives and recording it in a central database.

"I looked more broadly at the market beyond the pharmaceutical sector and found that users were building customer databases which everyone in the company could usa. I thought that the pharmaceutical industry was blinkered on this issue and that burean services provided too narrow a way of using information."

The company's sales management had to be convinced that this philosophy was a good one. After continuing to evaluate new products as they came on to the market, the company shortlisted three suppliers, ISS and two burean services.

Eventually, Ms Awbery won her way and the ISS system was chosen and installed on a Hewlett-Packard HP9000 Unix server, linked into the corporate Banyan Vines network. Sales staff use Toshiba laptops and office staff usa personal computers of various makes.

The system was close to the user's requirements, but some customisation had to be carried out by ISS to integrate it with an Evalumap executive information system from the US vendor ZS Associates.

After a three-month pilot project proved successful, the system was rolled out countrywide in just four weeks.

Training the sales force was a big task, since many of the staff had never used a compnter before and were not familiar with the technical jargon; some were opposed to the whole idea. A few months later all of them were capable of using the system and most were enthusiastic.

Oxygen links the sales force and regional managers to the sales and marketing department at Guildford, the manufacturing facility in Northumberland and the distribution depot in Sheffield. A total of around 160 people now make use of it. Sales increased substantially in recent months, in contrast to most competitors, which Ms Awbery attributes partly to the ISS system.

The French parent company has recently looked at the system and is now considering adopting it for its 800 representatives.

ISS's head of sales and marketing, Mr Phil Richardson says the product is suited to large sales forces and can be integrated with healthcare data from companies such as Walsh Mander and Intercontinental Medical Statistics. Rival burean services have recently reacted to ISS's success by changing some of their offerings to the pbarmaceutical industry.

George Black

Business analysis: priorities in sales rarely match those of marketing. Above: visitors at a sales and marketing exhibition in the UK discuss the new range of software applications, integrated solutions and sales management systems now available from more than 60 suppliers in the sector.

■ Financial services application

Report by George Black

It pays to know your customers better

Software helps improve the response rate in selective direct mailings

Guardian Financial Services, the life assurance, pensions and unit trusts division of the Guardian insurance company, has found a way to know its customers better through a database marketing system.

It chose a software product from one of the leading suppliers, the US firm Harte-Hanks Data Technologies. Founded in 1968, it is part of Harte-Hanks Communications and has 130 clients in the financial services sector.

Guardian Financial Services wanted to improve the targeting of its direct marketing programme and make mailshots a more integral part of its marketing strategy. But it did not know enough about its customers were to do this.

Its three separate mainframe computer systems dealing with life assurance policies and pensions contracts did not communicate with each other. Details of the customers and what policies they beld were obscure.

A new system was needed to enable customer profiling and research into business trenda before direct mail could be implemented effectively.

The company evaluated five systems and cbose the one from Harte-Hanks because, according to product marketing manager Mr Stuart Gitsham, it was "tried and tested, ran fast, had good technical aupport and was relatively cheap".

He adds: "We were able to play with a database of 800,000 records on a personal computer, so we knew what we were buying and we knew it would be np-and-running quickly."

Mr Gitsham also took up reference sites in tha same industry and had favourable reports from TSB and Scottish Widows.

The option of developing the system in-house was rejected because it was felt it would probably not give fast enough response times, would require long-term technical support which the in-house team could not offer and would be more expensive.

The outcome was the creation of a single customer information database built exactly to the user's requirements in around three months.

"Now we can type-in a customer's name and get full details of all policies beld," says Mr Gitsham. "We have identified our most profitable and valuable customers, which we did not know before, and this is the most important thing to know."

It enabled the company to focus its marketing budget on those customers in its mailshots. The response rate to direct mailings has risen from 1 to 3 per cent to 10 to 30 per cent, while the volume of letters sent bas fallen from 5,000-10,000 per mailshot to only around 2,000.

"We have cut out many of the peopla who are not likely to be interested," Mr Gitsham says.

The system revealed that the company had just under a million customers who held 1.25m policies between them. This implied that a very large number of customers bad only one policy and suggested there was great scope for cross-selling.

"The life industry is geared to selling new business, but the cost of acquiring new customers bas been going up," says Mr Gitsham. "It makes much more sense to 'farm' the existing customer database.

"We found out that customers who have purchased from us in the past 18 months are ten times more likely to purchase again."

The company has therefore set up a new sales channel by appointing 30 customer advisers.

The system is being applied to studying the characteristics of customers, using geo-demographic data supplied by CACI. Its Acorn classification system enables Guardian to use post codes to divide customers into social groups.

This is useful when trying to target new products which are known to be attractive to certain groups, such as corporate bond personal equity plans (PEPs), says Mr Gitsham.

> A customer information database, built exactly to the user's requirements, was created in three months

Another area in which the system is being used is predictive modelling, for example in trying to forecast which policies are likely to lapse and which can be re-started.

Mr Gitsham says the company is still learning how to fully use the system; there have been some teething problems in understanding how it works – "the information does not automatically jump off the screen," he comments. But Mr Gitsham is confident that the company is beading in the right direction.

□ Managing contacts and sales prospects: see Goldmine application report, page 24.

□ Accounting packages: for details of the next month's Software at Work, see announcement, page 24.

CASE STUDY Marketing in the construction industry

Flexible tracking system saves £5m a year

John Laing, the UK construction company, took on SPS (Sales Productivity System) software from Saratoga Systems as part of a down-sizing move from a mainframe to a client/server structure. When the decision was taken to migrate from the mainframe, it began looking for a replacement for its old marketing system which would retain its best features and give scope to expand its functions, *writes George Black.*

The mainframe database system had been used by all the marketing staff as well as sales staff and many other departments. It contained a mass of information on projects, bids, costings and contacts.

The company moved to IBM RS/6000 server machines with personal computers, running Microsoft Windows as clients. A working party of users and computer specialists was set up to study the requirements for a new marketing system.

First, the company invited bidders to attend a briefing on what was wanted. Next it sent out questionnaires to around 35 interested vendors and saw many of their products demonstrated.

Then it looked at eight products in greater detail, reducing the field to a shortlist of three.

Around 50 users were involved in testing two of the shortlisted systems. Mr Chris Goward, Laing's group information technology project manager, says this ensured that they chose a system which they wanted and would be keen to use.

Mr Goward says the company felt it was taking a risk in buying a product from a small US vendor which was new to the UK and which might have had an uncertain future.

There were no existing UK users among large construction contractors and no Unix-based sites to consult. For that reason it enlisted the help of IBM in evaluating the product and insisted on a tight contract with Saratoga Systems to guarantee its performance. The guarantee has been bonoured and the system typically delivers sub-second response times.

"Wa were a fairly discerning user because we had run a sales and marketing system for seven years on the mainframe," says Mr Goward. "We knew exactly what we wanted."

The company picked SPS because it best matched the functionality of the previous system and had the expansion potential required by the users. The company bought a licence for up to 50 concurrent users, for less than £50,000, which Mr Goward describes as "very good value for money."

The system had to be re-written to run on Unix. Screen layouts were customized and marketing data was prepared for tha database before the installation over a period of six months. Most of that work was done by in-house staff.

User-friendly

The installation was carried out over a three-day holiday weekend and the system was up-and-running as planned on the following Tuesday morning.

The system has been welcomed by around 300 users in 25 offices across the UK. Of those, around 60 are heavy users and 240 occasional users; 30-40 is the typical number of concurrent users.

The system has been mainly used for tracking leads from an early stage through projects to providing information for resource planning. It has helped with the difficult problem of balancing the work intake with resources available, says Mr Goward. Laing has stretched the system to its limits. It performs much the same function as the mainframe system, but with greater flexibility and at much lower cost. The system is "a lot more user-friendly than its mainframe predecessor," says Mr Goward.

"Information can be accessed a lot more easily. It is easier to customise, to add new information and prodnce new reports than with the mainframe system."

He says they have achieved about a 50 per cent reduction in computing costs by moving off the mainframe, or about £5m a year across all the corporate information systems.

SPS was written by Mark Elconin, founder and chief executive of Saratoga Systems. Ha was first successful in the industry as author of the mainframe spreadsheet, Supercalc.

SOFTWARE AND IT SERVICES MARKET

1 Datafile Software Limited

Brunswick Business Centre, Brunswick Way, Liverpool L3 4BD
Tel: 0151-709 0929 **Fax:** 0151 709 2070

Company Description
Datafile Software accounting applications are the most flexible in the UK. Built around our open, user - definable database and supported by a vast range of parameters, means that no programming or 4GL skills are required. Datafile is increasingly the choice for the second time user. Over 5,000 UK users.

Hardware
PC, Novell and all Dos based systems

2 Scala International

Scala House, 23-24 Bourne Court
Woodford Green, Essex IG8 8HD
Tel: 0181 550 1994 **Fax:** 0181 551 7429

Product Description
The International Scala Group develops and markets Scala, Accountancy Age's Accounting Software of the year 1994, which is a fully multi-lingual, multi-currency business management and accounting system. Supported from 54 offices worldwide, in 30 different languages, Scala is extremely flexible offering specific parameterisation and powerful multi-dimensional capabilities.
Hardware
IBM compatible PCs, Networks, All Unix systems.
Geographical Coverage
Worldwide · 12,000 installations in 92 countries.
Applications Scala Financials, Logistics, Business and Manufacturing, available in DOS, Windows and Unix Versions.
Cost Price on application

3 Systems Union Limited

1 Hammersmith Broadway
London W6 9DL
Tel: 0171 312 4545 **Fax:** 0171 312 4546

Company Description
SunSystems is the complete, international, client/server business solution from Systems Union. Installed by over 10,000 companies in over 160 countries, its global application is enhanced by: full multi-company and multi-currency processing and availability in 22 languages.

Hardware
PC-Lans, Unix, Vax, NT, Windows 3, Windows 95.

Applications
SunAccount, SunBusiness

Cost
On application.

4 KAI Computer Services Ltd

8 Kings Exchange, Tileyard Road
London N7 9AH
Tel: 0171 6093746 **Fax:** 0171 6093742

Company Description
OCTOPUS Imagine if you can:
- Be better informed using a shared organisation-wide activity and contact system.
- Achieve greater productivity by reducing your work effort when dealing with daily tasks such as letters, faxes, appointments and even account enquiries.
- Increase control by having all documents, details of phone conversations and any activities you choose tracked by your contacts.

Why aren't you getting the most out of your Personal Computer?
Applications
Windows 3.1, 3.11, NT and 95. Network ready and ODBC compliant. Works with flat file formats such as Access and FoxPro. In client server mode with SQL Server and Oracle.

5 CtC Ltd.

Portland House, London Road, Bagshot, Surrey GU19 5PG
Tel: 01276 453105 Fax: 01276 453106

Company Description
Automated data capture from hand written forms via ICR/OCR/OMR character recognition. Document processing. Imaging, storage and retrieval. High traffic ISDN computer linked fax systems.

Hardware Compatibility
PC/Win/Win 95/NT.

Geographical Coverage
UK & Europe.

Applications
Teleform ICR.

8 Safetynet Plc

12-13 Bracknell Beeches,
Bracknell, Berkshire RG12 7BW
Tel: 01344 869933 **Fax:** 01344 360474

Company Description
We provide business continuity and distaster recovery services from five centres in the UK and Europe.

Be it an IT solution or a fully integrated Business Plan, we follow tried and tested methodology; relevant risks are assessed, optimum resilience built and appropriate Plans developed. Plans are then tested and updated to ensure ongoing viability.

We offer full DR solutions covering Mid-Range and PC LAN systems

Our Trading Places service provides hot-site DR for front and back office dealing rooms and was developed jointly with Reuters.

7 Movex (UK) Limited

Savile House, Savile Road,
Elland, Yorks HX5 0NU
Tel: 01422 377611 **Fax:** 01422 310109

Company Description
"Integration, flexibility, ongoing and proven development path, real commitment to high quality international service and support" are just some of the reasons why over 1100 major companies have chosen MOVEX software - often to support BPR and Rightsizing. Over 80% of MOVEX's sales are to pan-European companies, producing a turnover of £74 million per annum.

Hardware
IBM AS/400. GUI includes Windows and OS/2.
Price on application, includes user input to development.

Geographical Coverage
45 Offices worldwide.
Concurrent translations into 17 languages

Applications
Truly integrated manufacturing, financial and distribution software. Strategy includes OOT and Client/Server.

8 MR-Data Management Group Plc

47 Bastwick Street,
London EC1V 3PS
Tel: 0171 250 3377 **Fax:** 0171 250 1873

Company Description
MR-Data Management Group provides comprehensive facilities management and out-sourcing for data management requirements.

Services include: Image and data capture, electronic printing, secure off-site data storage and market leading Memex software.

Hardware
All major systems

Geographical Coverage
UK, USA, Middle East

Applications
All image and computer data.

9 Lawson Software

Capital Place, 120 Bath Road
Hayes, Middlesex UB3 5AN
Tel: 0181 754 8470 **Fax:** 0181 754 7766

Company Description
Lawson Software offers robust, client/server applications with proven business benefits for companies worldwide. Lawson has 20 years of experience in developing business applications, with high-end, corporate functionality. Combining that experience, with a unique underlying development technology strategy, Lawson offers future proof solutions - offering both high-end functionality and openness and integration to the newest technologies.
Hardware
AS/400, RS6000, HP9000, DEC Alpha, Sun, Sequent, U6000
Applications
Accounting, Distribution Management, Materials Management, Lawson Tools and Open Enterprise Desktop.
Coverage
FT 2000

LAWSON

10 Lysander Systems Limited

P O Box 688, High Wycombe, HP10 0AH
Tel: 01628 532222
Fax: 01628 520584

Company Description
Lysander is an open systems supplier, providing client/server business systems across a broad range of industry sectors. We have developed alliances with market leading hardware and software vendors which, along with our comprehensive range of integration and support services enable us to supply complete business solutions.

Hardware
Open systems across Unix, Windows and Novell.

Coverage
UK

Applications
Accounts, Informix,

LYSANDER

11 Anglo Technology Group Plc

Mill Pool House, Mill Lane
Godalming, Surrey
Tel: 01483 425060 **Fax:** 01483 428998

Company Description
Anglo specialise in the supply and finance of mainstream IT solutions, including PCs, Novell Networks, MIs, system integration, support and technical services. Lease rental facilities are offered on all products allowing access to the latest technology without the need to outlay large capital sums. Upgrades are available throughout the lease.
Hardware
IBM RS6000, IBM PCs, Compaq, ALR, Apple Mac, Digital and Novell Networking.
Geographical Coverage
Home Counties.
Applications
Multisoft, AIX, Windows, Novell, DOS
Cost
Costings are available on flexible finance solutions.

12 Arcona Ltd

2 Warner House, Harrovian Centre
Bessborough Road, Harrow HA1 3EX
Tel: 0181 4225001 **Fax:** 0181 4229727
Email: training@arcona.co.uk

Company Description
ARCONA offers training needs analysis and tailored re-skilling routes designed to maximise the benefit of investment in Client Server architectures and Object Oriented technology. Current IT developments require continual re-examination of effectiveness of solutions. The challenge is to modify, enhance and extend internal skill sets to keep pace. ARCONA's specialist experience has helped many organisations to meet the challenge.

ARCONA
http://www.arcona.co.uk/training

13 Lysander Systems Limited

P O Box 688, High Wycombe, HP10 0AH
Tel: 01628 532222
Fax: 01628 520584

Company Description
When you're chasing money the excuses people give for not paying come thick and fast, it's down to you to ensure that your money reaches your bank quickly. That's why we developed Lysander/CMS, which reminds your controllers each morning who to call and why they couldn't pay last time.

Hardware
Open system for Unix and Windows.

Coverage
UK

Applications
Credit management debt collection

LYSANDER

14 MarketPulse

36-38 Market Street, Maidenhead
Berkshire SL6 8AD
Tel: 01628 71513 **Fax:** 01628 781255

Company Description
The system for vast customer databases measured in tens of millions. Blisteringly fast segmentation. Employed by the UK's leading direct marketers in Retail, Mail Order, Travel, Telecommunications and Financial Services.

Hardware
IBM Mainframe + compatibles. PC front end.

Geographical Coverage
Worldwide.

Applications
Database marketing.

Cost
Price on application.

15 Envoy Systems Limited

Boston House, The Little Green,
Richmond Surrey TW9 1QZ
Tel: 0181 9486000 **Fax:** 0181 9486712

Company Description
Envoy Systems is an independent systems integrator specialising in Computer Telephone Integration (CTI) products, applications and services for Call Centres.

Its customer base is those major organisations whose success depends on effective and efficient telephone Call Centre operations, such as home banking and telesales.

Hardware
Any XPG3 Unix compliant platform.

Coverage
UK and Europe

Applications
CTI applications programmers interface.

16 Brown's

St. Agnes House, Blackheath
London SE3 8RD UK
Tel: +44 181 2979797
USA Tel: 1800 4270149

Company Description
Do you need to provide secure, fast, reliable, economic access to your enterprise data centre?

Whatever the network, PSTN, ISDN, X.25, mobile or the Internet, the global solution chosen by financial institutions, government and the motor trade is DNAccess.

To become a DNAccess user call Brown's.

BROWNS

17 SSA

Frimley Business Park
Camberley, Surrey GU16 5SG
Tel: 01278 692111 **Fax:** 01276 692135

Company Description
With over 7,000 client implementations, BPCS Client/Server represents the world's largest installed base for a single enterprisewide product line addressing integrated process and discrete manufacturing, supply chain management, and global financial applications.

Hardware
As 400, RS 6000, HP9000, Digital Alpha.

Coverage
Over 40 offices worldwide.

SSA

18 PeopleSoft UK Ltd

Apex Plaza, Reading,
Berkshire RG1 1AX
Tel: 01734 522 000 **Fax:** 01734 522 001

Company Description
PeopleSoft develops and markets PeopleSoft Financials, PeopleSoft HRMS, PeopleSoft Distribution and People Tools, a powerful application development and customisation environment. PeopleSoft combines graphical user interface, relational database technology, and client/server architecture to deliver superior product functionality and technologically innovative applications, with the best customer service in the business.
Hardware
IBM, Digital, Hewlett Packard,Data General, SUN, NCR.
Coverage
Fortune 500 and Fortune 1000
Applications
PeopleSoft Financials, PeopleSoft HRMS, PeopleSoft Distribution, PeopleSoft Manufacturing.

PEOPLE Soft

19 Software 2000 UK

Crosby House, Meadowbank, Furlong Road,
Bourne End, Bucks SL8 5AJ
Tel: 01628 850850 **Fax:** 01628 850243

Company Description
Software 2000 offers a comprehensive suite of financial and human resources software designed exclusively for the IBM AS/400 server and related technologies, using client/server and object oriented technologies to provide easy-to-use icon and graphical screens and integration with popular windows spreadsheet and word processing packages and taking into account all the requirements of the multinational corporation. Software 2000 has over 1200 clients worldwide.
Hardware
IBM AS/400, Server, Client/Server - OS/2, Windows, MAC.
Geographical Coverage
UK, Mainland Europe, USA, Australasia, Asia, Sth Africa.
Applications
Totally integrated financial management & human resources
Cost
Entry Level Price £25,000

20 Microvitec Multimedia

Bolling Road,
Bradford BD4 7TU
Tel: 01274 390011 **Fax:** 01274 734944

Company Description
Typically used to facilitate transmission and storage of video material, Microvitec Multimedia's MPEG encoding suite can convert and compress material to ISO11172 MPEG1 and ISO 13818MPEG2 data streams. Video source material can be supplied in a wide range of formats: analogue and digital betacam, D1, D3, D5 and one inch C.
Hardware
Any MPEG standard decoder required for playback
Coverage
Worldwide
Applications
Training video on demand, video games and TV, video CD and CDI
Cost
On application

MICROVITEC MULTIMEDIA

21 Prophecy Europe Limited

87 London Street, Reading,
Berkshire RG1 4QA
Tel: 01734 391110 **Fax:** 01734 393056

Company Description
Prophecy supply financials, HR, and utility billing software via a European distributor network, including some to the industry's leading names and have over 730 sites worldwide. Prophecy Open is a client server, GUI database independently developed using OO techniques it is suitable for any medium/large organisation.
Hardware
Prophecy is available on some 40 h/w platforms.
Coverage
Worldwide distributor network, now enquiries welcome.
Applications
Financials HR and Utility Billing.
Cost
On application.

22 Netsoft International Limited

Coach House Cloisters,
Hitchin Street, Baldock SG7 6AE
Tel: 01462 490094 Fax: 01462 490918

Company Description
Netsoft designs, develops and distributes a range of software products that provide easy, reliable and cost-effective client/server software solutions, linking PCs and PC networks to IBM mainframe and AS/400 computer systems. Netsoft are available for Windows, Windows for Workgroups, Windows NT, Windows 95 and IBM's OS/2 and Warp operating systems.

Geographical Coverage
International.

Applications
IBM mainframe and AS/400 connectivity.

23 Brown's

St. Agnes House, Blackheath
London SE3 9RD, UK
Tel: +44 181 2979797
US Tel: 1800 4270149

Company Description
Are you a user of IBM's IMS system?

Would you like more development and testing capacity without increasing expenditure on hardware?

COPE users manage more development and testing on their hardware. To become a COPE user call Brown's.

BROWNS

24 Kolvox

Kolvox VoiceWriter Ltd
79 Knightsbridge, London SW1X 7RB
Information Hotline: 0161 553 6666

Company Description
Now you can dictate letters and reports straight into your PC in as much time as it takes to say the words! Kolvox flagship products, OfficeTALK® and LawTALK®, allow you to control your PC entirely by voice, creating accurate text from spoken words without lifting a finger. To streamline your office efficiency, maximise productivity and reduce costs, talk to us today.
Hardware
Minimum 486DX/33, 16Mb RAM, 30 Mb free hard disk space.
Applications
Anyone in the business or legal market who would prefer to talk to their PC than use a keyboard or mouse.
Cost
From as little as £645 + VAT.

kolvox

25 Faculty Ltd

Unit 1, Silverglade Business Park
Leatherhead Road, Chessington
Surrey KT9 2NQ
Tel: 01372 749690 **Fax:** 01372 737478

Company Description
Founded in 1987, Faculty runs authorised training courses and consultancy on Novell, Microsoft, Bay Networks, Cheyenne, Palindrome and Cisco networking products. With training centres in Chessington, Surrey and Central London, Faculty can also provide you with a range of PC applications to meet all your company's IT training requirements.

Coverage
United Kingdom

26 Communicate Limited

The Technology Transfer Centre,
Silwood Park, Buckhurst Road,
Ascot, Berkshire SL5 7PW
Tel: +44 (0)1344 291294 **Fax:** +44 (0)1344 291284

Company Description
Communicate is Europe's leading supplier of cellular PCMCIA products. Formed in 1986, the company offers a broad range of fax and data PC cards approved to work with data compatible GSM, DCS and ETACS Motorola phones and PSTN landlines. When using a Communicate PC card users can send and receive data and fax at speeds of up to 28,800bps. Products include a three year warranty and unlimited technical support.
Hardware
PCMCIA Type II compliant, Motorola manufactured data-ready ETACS and GSM phones. DOS, OS/2, Windows & Windows 95.
Coverage Worldwide
Applications Mobile computing, teleworking, remote access. **Cost** From £299 plus VAT

27 City Cable Company Plc

Centra House, Riverside Business Park
Stoney Common Rd, Stansted, Essex CM24 8PL
Tel: 01279 812101 **Fax:** 01279 813989

Company Description
Originally, City Cable Company Plc was concerned only with the installation of voice and data cabling, in Ethernet, Token Ring and Serial Networks. However, with the growth in Structured cabling systems and the introduction into the product portfolio of the Siemon Cabling System (A structured cabling system with a 16 year manufacturers warranty), the company has become more involved with providing a wider range of services including managed and unmanaged Hub solutions and high speed networking (100 BaseT).
Geographical Coverage
National.

28 Microvitec Multimedia

Bolling Road,
Bradford BD4 7TU
Tel: 01274 390011 **Fax:** 01274 734944

Company Description
Creator from Microvitec Multimedia is a new multimedia information publishing package. Requiring no programming skills and priced at £129.95, it allows any windows PC user to develop their own interactive systems incorporating audio, text, graphics and moving images. Creator is supplied with a CD Rom which includes graphics, sample templates and sound files.
Hardware
486/33 with min 4MB of ram. Local bus or PCI graphics card.
Coverage
Worldwide
Applications
POS, POI, Training education.
Cost : £129.95

MICROVITEC MULTIMEDIA CREATOR

29 Axent Technologies

4a-10 West Street, Epsom
Surrey KT18 7RG
Tel: 01372 729655 Fax: 01372 749965

Company Description
AXENT Technologies is exclusively devoted to providing client/server information security solutions for multi-platform environments with its OmniGuard suie of products. Axent provides its clients with everything from industry leading consultancy through to world-class security software and support.
The company founded in 1994, is privately held and headquartered in the USA with offices worldwide. AXENT is a wholly owned division of Raxco Inc. and serves a global customer base of over 5000 blue chip clients.
The OmniGuard suite is specifically designed for distributed computing environments and collectively manages, secures and protects enterprise-wide systems and information.

Hardware
The OmniGuard suites of products are designed for multi-platform environments.

Cost
Dependent upon platform - POA.

AXENT TECHNOLOGIES

30 CFM Group Ltd

Westhorpe House, Westhorpe
Marlow, Bucks SL7 3RQ
Tel: 01628 488888 **Fax:** 01628 488088

Company Description
CFM is one of the UK's fastest growing and most successful IT outsourcing companies. With a turnover of over £120m pa and over 100 clients, CFM has unique experience of its core business. CFM's success in both the public and private sectors is based upon its continued investment in people and its ongoing commitment to client service.
Hardware
CFM solutions are system independent, encompassing all major vendors.
Geographical Coverage
CFM operates throughout the UK, with over 30 locations.
Applications
CFM supports oracle open applications.

31 DMR Group Ltd

Heathrow Boulevard IV, 280 Bath Road,
West Drayton, Middlesex UB7 0DQ
Tel: 0181 754 1010 **Fax:** 0181 754 0838

Company Description
DMR is one of Gartner Group's 18 "Leading Worldwide Professional Services Organisations" with 3,000 professionals specialising in the outsourcing of applications maintenance and mid range & client-server operations.

Clients enjoy the benefits of outsourcing to a world leader who can provide improved service levels, controlled costs, advanced proprietary methodologies & a broad spectrum of consultancy services.

DMR has the knowledge, the methods and the experience to provide you with world class outsourcing services.

DMR

32 AVG Sales & Marketing Ltd

The Innovation Centre
225 Marsh Wall, Docklands, London E14 9FW
Tel: 0171 4541790 **Fax:** 0171 3459126

Company Description
AVG is the innovative leader in sales & marketing automation with its *GoldMine* suite of products. *GoldMine* has been designed specifically for the networked office and remote users. The new *GoldMine for Windows 95* is out this month.
"...for truly co-operative sales & marketing groups, there's nothing better than this."
PC Magazine, Oct 94
Hardware
IBM-compatible portables, desktop/networked PCs
Coverage
Worldwide
Applications
Sales, Marketing
Contact Management
Cost
£395 single user

GoldMine

33 Chips International Limited

11 Archway Upper Staithe Road
Stalham, Norfolk NR12 9AQ UK
Tel: 44(0)1692 580888 **Fax:** 01692 582704

Company Description
PURSUIT offers modules for Prospect or Project Contact Management, Quotations, Competitors Profiles, Sample Register, Marketing Campaigns, Technical Libraries, Guarantee and Complaint Logging, Telemarketing. Our mobile and office based systems are personalised to suit your established working methods. Where required we can link to your core system for the extraction of data.

Hardware
400+ platforms incl PC's, Unix, Networks, AS400

Geographical Coverage
Worldwide

POWERED BY PROGRESS.

34 Consensus IT Ltd

The Paddock Handforth
Cheshire SK9 3HQ
Tel: 01625 537777 **Fax:** 01625 539621

Company Description
The author of SalesTeam, a leading windows based sales & marketing control system. Fully multiuser and remote operation. Includes full company & contact details. To do lists, quotes, telemarketing, projects. A package that can be tailored to meet individual requirements.
Hardware
PC Mac Novell, SQL link to all main databases (Oracle) etc.
Geographical Coverage
Worldwide.
Applications
Enterprise wide S&M.

هكذا من الاصل

■ Case study: GoldMine software

Accountants discover the paydirt nuggets

Award-winning software for managing sales contacts now has 70,000 users worldwide

The chartered accountancy partnership, BDO Reads, adopted GoldMine contact management software from the US firm Elan Software to help with its mailshots.

The accounting company is an independent affiliate of the international accounting firm BDO Binder. Based in Guernsey in the Channel Islands, it has ten partners and 130 staff, dealing with clients internationally.

Elan's GoldMine system was installed mainly to keep track of mailshots and monitor the results of marketing campaigns. The system also manages BDO Reads' client database, recording all contacts with clients and prospects. The company was particularly looking for a package with good mail-merge facilities to be able to handle its increasing number of marketing campaigns. It had to be able to link up to the Microsoft Word system, which was the company's standard for word-processing.

Before discovering Goldmine, BDO Reads had used a package called Telemagic, later acquired by Sage, but found that at that time it could not store historical data on what marketing literature had been sent out and to who. This was a feature the user insisted on.

> The programme has plenty of potential for cross-selling

The Telemagic software had been supplied by the London-based software distributor AVG Sales and Marketing. AVG was asked to suggest an alternative and recommended GoldMine.

The company took AVG's advice and bought a five-user licence for £995. The software ran on the Microsoft DOS operating system, but BDO Reads wanted to be able to use Microsoft's Windows user interface for greater ease of use. Elan promised and delivered a version for Windows. Six of BDO Reads' staff, comprising partners, managers, marketing assistants and secretaries, now use the system on a Novell NetWare local area network of IBM-compatible 486-chip personal computers.

It has been applied to a wider range of functions than was originally anticipated, according to Mr Paul Ogier, computer services manager.

"We began with mailshots of our quarterly newsletters and periodical brochures," he says. "It has helped us to target who should receive these publications. The partners who deal mostly with the clients request that a particular client should receive one of our publications and that information is added to the system, so it is very easy to select the names and build an accurate list."

GoldMine has also been applied to targetting invitations to attend company seminars. After the events, it helps people in the marketing department to follow up by contacting the attendees and generating new business.

The firm's partners are now considering whether GoldMine should be used more for cross-selling – "so far, we've only used it for cross-selling to a limited extent, but there is no doubt that it has a lot of potential in that area," says Mr Ogier. "We'll also be looking at using it to handle client correspondence, so we can avoid duplication and improve continuity."

He says it is hard to quantify the impact of the system but notes: "It has definitely increased the productivity of our sales and marketing effort and has raised our perceived professionalism by getting customer feedback."

A weakness in GoldMine was its reporting facility, he comments. The company got around this by adding a reporting system called Crystal Reports from the Canadian software vendor Crystal Services. This has enabled it to extract data from the GoldMine system and design its own reports. Mr Ogier says there would be a wider range of software to choose from, if he were to buy now, but sees no reason to think he would reach a different decision.

Elan Software was set up in 1989 and its GoldMine product now claims more than 70,000 users worldwide. The product has won a number of industry awards in the UK and US from 1993 to this year. A version for Microsoft's Windows 95 operating system is about to be launched.

George Black

□ For details of this year's 'Business Software Challenge' competition, see page 4

■ Desktop applications · Report by Louise Kehoe in California

Microsoft surges ahead in the battle for the desktop

The Internet software market is potentially one of the most lucrative prospects for the software industry

Microsoft may be best known for its Windows operating system software, but more than 60 per cent of the company's revenues come from personal computer application programs ranging from the widely used "Office" suite to children's games.

Over the past year Microsoft has emerged as the market leader in most categories of desktop software and in the vast majority of geographic markets.

In spreadsheets, Microsoft's Excel commands an 80 per cent share of the world market. In wordprocessors, Microsoft Word holds a 70 per cent share. PowerPoint, the company's presentation graphics package, is at about 75 per cent while Microsoft Office, the suite of desktop applications has reached a dominant world market share of about 84 per cent.

Given these figures, it would seem that the "battle for the desktop" is over and that Microsoft is the clear winner. Yet other companies including Novell and Lotus Development, now owned by International Business Machines, continue to persue Microsoft in the office desktop market.

Other challengers include Intuit, with its popular personal finance management program called Quicken and Netscape Communications, which beat Microsoft to the punch in establishing itself as the predominant supplier of Internet browser software.

Microsoft, however, is moving from strength to strength. Over-shadowed by the recent launch of Windows 95 was the company's introduction of a new version of its Office suite, called Office 95.

Although the company has not revealed sales figures for the new business applications suite, the impact of the Office 95 product launch on Novell would suggest that Microsoft is expanding its hold on the market.

Last month, Novell revealed that sales of its competing Perfect Office suite had fallen sharply over the previous few weeks, since the August introduction of Windows 95 and Office 95. Sales of Windows 95 rose to 7m copies within seven weeks of its launch in August, far exceeding analysts' sales projections.

Novell said preliminary indications based on the first two months of the quarter ending October 28 were that its WordPerfect family of application products could decline to less than $60m from $134m in the same period a year ago, when applications accounted for 28 per cent of Novell revenues. In the current quarter, applications will be below 13 per cent of revenues, the company said.

The financial sector is a prime target in the software battle for the desktop. Lotus is ahead of Microsoft in the market for communications software with its successful Notes program. Pictured here are traders in the dealing room of Fuji Bank in London. Picture by Ashley Ashwood

> Windows 95 has created new opportunities for many other software companies to sell 'upgrades'

Novell is developing Windows 95 versions of its applications, but does not expect to bring them to market until early next year. The situation suggests that Novell's strategy for competing with Microsoft may be backfiring. Last year, Novell acquired WordPerfect, publisher of the popular word processing program of the same name, for $1.4bn and Borland International's Quattro Pro spreadsheet business for an additional $145m.

At the time, Wall Street analysts fretted that Novell might have paid too much for WordPerfect. Now, it appears that Novell might have been better off sticking to the networking software market, where it remains a dominant force.

Lotus Development, acquired by IBM earlier this year for $3.2bn (an adjusted figure recently issued by IBM), is also a Microsoft competitor in the applications arena. While IBM has said little about the performance of Lotus' applications division since the acquisition, but market analysts suggest it, too, is loosing ground.

Lotus, however, is ahead of Microsoft in the market for communications software with its Notes program, which enablas business users to exchange messages, co-ordinate activities and work collaboratively across a computer network. With Notes, IBM aims to jump into the forefront of "network centric" computing in which applications are geared to network use, rather than desktop computer use.

Netscape Communications is Microsoft's newest challenger. The company, formed last year, supplies the most widely used "browser" software for the World Wide Web.

Netscape got its break partly because Microsoft was slow to recognise the importance of tha rising popularity of the Internet. Now, the software industry leader has awakened to the opportunities of the global computer network and appears to have turned its guns on Netscape.

With the introduction of Windows 95, which incorporates a WWW browser, Microsoft is now targeting the market that Netscape has pioneered. Netscape would prefer to avoid a direct confrontation – "there is a tremendous effort to polarise us against Microsoft," says Jim Clark, Netscape chairman. "We're not in the business of going after their desktop software business. Wa are, in fact, going after a new market."

The Internet software market is potentially, however, one of the most lucrative prospects for the software industry. The prize in this looming battle is leadership in the emerging markat for software that enables secure electronic commerce and business communications via the Internet.

Microsoft attempted to place itself in tha forefront of this market with its planned acquisition of Intuit, tha leading supplier of personal finance management software. However, a US Justice Department investigation threatened to delay the deal for several months and Microsoft eventually backed out.

According to Mr Clark of Netscape, Microsoft also proposed acquiring a stake in his company, but the talks went nowhere. Instead, Microsoft licensed Internet browser software from Spyglass, a Netscape competitor, and has updated its own personal finance software, called Money, which it is currently making available free to purchasers of Windows 95 in a special promotion.

While Microsoft is sometimes characterised as a software industry giant that is tramping on competitors, the company's introduction of Windows 95 has created new opportunities for many other software companies to sell "upgrades" and new versions of their products designed for the new operating system. Moreover, Microsoft's continued dominance in business applications programs depends largely upon its ability to respond quickly to emerging market opportunities.

'SOFTWARE AT WORK' IN DECEMBER

The Software at Work section of the next issue of the FT-IT Review on Wednesday, December 6, 1995, will focus on:

ACCOUNTING PACKAGES

For advertising details and an editorial synopsis, contact: Simon Larter's office at the FT in London, telephone on (44) 0 171 873 4129 or fax: (44) 0 171 873 3062 or write to tha *Financial Times, One Southwark Bridge, London, SE1 9HL.*

■ Outsourcing IT services

Report by Nuala Moran

Truth dawns on crucial issue

Capability in information and communications technology will make-or-break the business strategy of many companies. Handing over control of IT systems to a third party does not mean losing 'the crown jewels'


The financial sector, with its increasing dependency on information and communications technology, is the largest user of IT in the business world. The fastest-growing part of the IT industry is outsourcing – now standing at 20 per cent of the market and rising

Hands up any company that can separate its strategy for information technology from its business strategy? And given that IT is integral to everything a company does, how can control of IT be given over to a third party in an outsourcing deal?

It does not seem so long since the issue of how to align tha information technology strategy with the business strategy was a big pre-occupation of management consultants and many types of IT suppliers.

Now the IT strategy and the business strategy are one and the same: without information technology, Direct Line could not have turned the UK retail insurance market on its head; among food retailers, Tesco could not have trumped Sainsbury's with its loyalty card; Midland Bank could not have stolen the march in telephone banking and Ford would still make most of its money from selling cars and trucks, rather than from financial services.

The truth is dawning in many organisations: the IT capability will make or break the business strategy. The paradox is that against this background of increasing dependency on IT, the fastest-growing part of the IT sector is outsourcing – now standing at 20 per cent of the market and rising.

This begs the question: why, at the point when it becomes obvious that IT strategy is synonymous with business strategy, are companies rushing to give control of their IT systems to third parties?

John Bateman, chief executive for EDS Europe, the computer services group, suggests that question should be: "How can they afford *not* to? You have to split operational considerations from strategic ones. In most companies in Europe, it is now acknowledged that you no longer get what you want out of IT merely by *owning it*."

In the early days of computing, he says, "companies got the vast majority of value from running faster, slicker and cheaper systems. Now the operational part is a commodity."

Ray Cross, managing director of the outsourcing company Axis is more direct when he says that "companies have turned to third parties because they are fed-up with not getting what they want in-house."

He adds: "The fact is, enlightened organisations *do* understand the strategic importance of IT and that's why they go 'outside' – to get new applications delivered on time."

John Little of the consultancy, PA Technology, which compiles an annual report on the outsourcing market says the latest survey shows a subtle change of thinking – "although they are emotional about their IT systems, companies begin to see that the key issue is information and what they do with it".

Mark Robinson of the consultancy, Morgan Stanley, which specialises in supporting companies on the decision on whether or not to outsource, agrees with this view – "once companies understand what information they need, there is advantage rather than risk in surrendering control of the delivery mechanism."

Reputable outsourcing companies are dedicated to understanding new technology "and they can deliver it in a stable form sooner than an individual company going it alone".

Robinson argues that outsourcing companies can offer economies of scale, spending money on research and development that no individual user company can afford.

Traditionally, most businesses have been wary about being first to deploy a new technology. But professional IT services organisations are able to deliver new technology at the earliest stage that it is safe to use.

Nevertheless, having the latest technology is no use at all if it is not the *right* technology for the job. Companies now realise that they must retain the skills to interpret the business information need into the technology requirement.

"To get the most from outsourcing, you should be in a position to go to a supplier and say: 'This is our information need, what can you do to deliver it?' It is facing up to the hard reality of their dependency on IT that forces companies to outsource," says Chris Earnshaw of IMI Computing.

The pace of change in technology is such that for many applications companies simply cannot dedicate anough resources. The commercial imperative may demand business process re-engineering, but few companies can muster the requisite skills in workflow management, document image processing, compnter integrated telephony and data capture needed to achieve auch changes.

Companies are turning to outsourcing not because they have skills and systems that they want to hand over, but because they realise there are so many key technologies they know nothing about, suggests Mr Earnshaw.

In the early days of outsourcing, companies made black and white choices – "hand it over and let someone who understands computers better than us, run our system" was one view, while others insisted: "Keep it all in-house, because no-one understands our computing needs as well as we do."

Today, there is a much more pragmatic approach with companies asking if systems are strategic – for example, a marketing database or an oil exploration system; or commodity, such as payroll or invoicing? Strategic systems are kept in-house, commodity ones are outsourced.

Another point that companies are just beginning to realise is that systems, such as networks, can be critical to their business hut have no strategic value in terms of distinguishing them from the competition, suggests Tim Foreman of Hewlett-Packard's outsourcing division: "A system can be absolutely critical without being strategic – because everyone has got one."

Apart from the strategic-versus-critical assessment, companies are also making a distinction between core and non-core activities when deciding if and what to outsource. Keeping the data network up-and-running may be critical to a retailer or a distribution company, but it is not a core activity - "much better, then, to hand it over to an outsourcing company where managing networks is the core activity," says Mr Foreman.

The recession "has made companies look at their navels and focus on how to be competitive," observes Simon Sjenitzer, business development manager at outsourcing company, SCC. "They know, for example, that putting a computer on every desk is 'key' to how they operate, but at the sama time they see the cost of personal computers going through the ceiling."

Attaining and retaining credible resources is 'core' to SCC, but not to its customers – "in fact, having to think about providing personal computers takes a company's eyes off its core business," he says.

BAA, which runs the UK's leading airports has taken this approach to outsourcing IT and other services.

"We 'benchmark' all our business activities and then ask: 'Is someone able to do it better?'," says Chris Campen, head of information systems policy.

While some companies turn to outsourcing to develop new systems, Mr Campen feels it makes more sense to hand over stable applications – "you don't need specialist BAA business knowledge to run our mainframe".

BAA retains control by disciplined contract management and setting its own policy and strategy. The company has deliberately 'outsourced piecemeal' to avoid over-dependence on one supplier, and it awards short contracts to enable it "to move with the market".

Companies are recognising that a fixation on IT has taken their eyes off what it is primarily there to do," says Russell Wolach, services marketing manager of Olivetti. "Now, they are seeing that IT is the means to an end."

Peter Falconer, marketing director of Hoskyns agrees: "In the early days of outsourcing, we had to go to great lengths to explain to people that handing over their computer systems did not mean losing the crown jewels.

"Now they are no longer constrained by the fear that giving up their computers means giving up their 'competitive edge'. There is a general recognition that it is not running the computers that matters, it is how IT is applied."

Looking ahead

The next issue of the FT-IT Review on Wednesday, December 6, 1995 will focus on the following key themes:

- *Home and home office computing and communications.*

The home PC market has been the most dynamic segment of the worldwide computer industry over the past 18 months creating a new surge in multimedia hardware and software sales, data communications and home telephony. Equipment and service areas will include:

- Desktop computers and portable computers. Developments for the home and small office market.
- Pocket PCs and electronic organisers .
- PCTVs: Is this the future?
- Desktop scanners and document management software.
- Home office printers – lasers and colour inkjets.
- Digital storage – hard discs, optical drives, rewritable CDs.
- Home telephony: cordless telephones, cellular networks and pagers.
- Modems, fax-modems, voice-modems, ISDN lines.
- Answering machines and facsimiles.
- Multimedia software: CD-Roms and video CDs.
- What's new for Christmas for the dedicated home office worker?
- Teleworking – equipment and home-working issues.
- Consumer on-line services – an industry in turmoil.
- E-mail, the Internet and the World Wide Web.
- Interactive television – cable operators, telephone networks and broadcasters square up.
- Personal productivity software.
- Electronic games consoles.
- US home PC-buying trends: moving away from the office PC.

SOFTWARE AT WORK:
Focus on accounting packages
Once the main reason for computerisation, accounting packages are no longer just the concern of the finance director. Integration with other areas of business – manufacturing, the supply chain, sales and marketing – have given the accounting package a new role as a management tool.

SPECIAL REPORT:
The Indian Software Industry
Focus on the $1bn Indian software industry, and its growing role as a provider of IT services internationally.

IT DIRECTIONS
Intelligent systems
The concept of artificial intelligence has fallen out of favour but intelligent systems have nevertheless resurfaced in various guises such as expert systems and neural networks.

- In January, 1996, the FT will publish an FT-IT special report: An A-Z guide to the Internet

For details regarding advertising and future issues, please contact:
Simon Larter or Dolly Corcoran, FT Advertising Department in London on telephone 44 (0) 171 873 4129 or fax: 44 (0) 171 873 3062

In the US:
New York: Gavin Bishop, tel. (212) 745 1342.
San Francisco: Nick Mayle, tel. (415) 637 9775

Background information for editorial consideration may be sent to:
Financial Times,
One Southwark Bridge,
London SE1 9HL.
Fax: +44 (0)171 873 3197

هكذا من الأصل

ALUMINIUM

Industry chiefs saved the day

The discipline showed by the producers when the industry was faced with virtual disaster has confounded analysts, writes Kenneth Gooding

It is time for a few people to stand up and take a bow for helping the aluminium industry to survive a time of unprecedented turmoil.

Step forward (in alphabetical order) Alan Born, chairman of Alumax; Jacques Bougie, president of Alcan; Dag Flaa, president of Hydro Aluminium; Richard Holder, chairman of Reynolds Metals; Bernard Legrand, head of Pechiney's aluminium operations; Paul O'Neill, chairman of Alcoa; Terry Palmer, chief executive of Comalco; Jochen Schirner, chairman of VAW Aluminium; and Theodor Tschopp, chief executive of Alusuisse-Lonza.

Between them, their companies hold direct interests in more than 7m tonnes of primary aluminium production capacity, equivalent to about 47 per cent of the western world total. The discipline they showed when the industry was faced with virtual disaster has confounded analysts.

Let Paul O'Neill, who heads the world's biggest aluminium group, tell the story:

"For the aluminium industry [the collapse of the Soviet Union] had profound consequences because all of the time the Russian federation existed, their own internal aluminium industry represented about 20 per cent of world production capacity. But for practical purposes, it was sealed off inside the Soviet Union and the satellite countries, which is to say it wasn't part of the rest of the world market.

"When the wall came down and the defence industry began to collapse in the Soviet Union – and consumption activity began to retrench very significantly – they began doing what intelligent people do. They packaged up their product, anything they could move, drag out or dig out, and sent it to the world markets, including massive amounts of aluminium.

"That triggered a very large accumulation of surplus aluminium in the world markets because, at the same time, the US economy was fundamentally in the sink, the Japanese economy was going down, and the European economy was withering. So we ended up at the high point with 2.6m tonnes of surplus aluminium in the world and, therefore, the lowest price ever last year.

"Frankly, with my free market instincts and beliefs, I sat and watched this happen for 2½ or three years after it started to show up in late 1990. Finally, it seemed to me that something needed to be done. So I decided that we at Alcoa needed to reduce the capacity that we were running because, in effect, we were contributing to the problem. So in June 1993 we announced we were going to bring our shutdown primary aluminium smelting capacity to over 300,000 tonnes.

"At that time I called on the US government to get interested in this issue because the only alternative we had, in a conventional approach, was to use the existing US trade laws to bring suits to effectively close the United States market to all other suppliers of aluminium. By that I mean, not just Russia, but Canada and Europe and Australia. All the other world producers.

"You would have to shut out everyone because once the aluminium has been produced, it is virtually impossible to tell one producer from another. So we were being put into a position where, if we were going to survive, we needed to do something about the overwhelming supply. And the only way to do it was to bring suits or to create a new way to think about the problem. "So I went to Washington, the [US] Aluminium Association got involved and together we created a new vehicle, the first of its kind – one that may never be done again – an administrative treaty among six nations, including the US and Russia, Norway, Australia, Canada and the rest of western Europe.

"The Russians agreed they would reduce their capacity by 500,000 tonnes and, because of the anti-trust laws, the rest of us were left to our own devices to decide what, if anything, we were going to do about western production capacity. The cumulative effect of those various decisions is that there has been a significant reduction in production capacity operation."

That administrative treaty was a "memorandum of understanding" (Mou) signed early in 1994. Shortly after it was signed, western producers announced more temporary closures, bringing the total to about 900,000 tonnes of annual capacity.

London Metal Exchange stocks have consequently dropped from that 2.6m tonnes peak to below 525,000 tonnes.

Analysts were impressed by the discipline shown by the western producers, although they believe the slight fall in Russian output was caused by production difficulties rather than any support for the Mou. They also believe that, although production in the west is on the increase again, producers will not re-start the bulk of their idle capacity until the market clearly needs it.

The temptation to break the spirit of the Mou was particularly strong towards the end of last year and the begining of 1995 when prices moved towards $2,000 a tonne (90.7 cents a pound), double the level at the bottom of the recession.

Apart from the producer discipline, two other factors helped to turn the market round: consumption recovered strongly and speculators developed a taste for aluminium as an investment, thus giving an extra lift to London Metal Exchange prices.

According to Mr David Humphreys, deputy chief economist at the RTZ Corporation, the world's biggest mining company, smelter cuts in the established market economy countries (Emecs) resulted in a 4.3 per cent fall in production in the region from the 1993 level to 14.42m tonnes last year while production in the world as a whole fell by 3 per cent to 19.1m tonnes. Consumption in the Emecs, meanwhile, reached 17.3m tonnes, up 10.3 per cent.

He says: "Whether the Mou was strictly necessary to bring about the production cuts that the market so patently required is debatable, but the discussions surrounding the Mou did contribute towards advancing the integration of the Russian aluminium industry with that of the Emecs. It was, however, rather less successful in stemming the flow of metal from Russia and Russian production is estimated to have fallen by only 140,000 tonnes in 1994 while exports from the Commonwealth of Independent States as a whole actually increased marginally to 1.95m tonnes."

As for the speculators, the CRU International consultancy organisation reckons hedge funds put about $2.5bn into aluminium markets last year and that this boosted aluminium prices by about $600 a tonne until the funds pulled out in February.

Those higher prices encouraged some additions to capacity and new smelter projects. Producers in India, Ghana, the Middle East and Slovakia expanded capacity this year but the most significant new project is Alusaf's 466,000 tonnes-a-year smelter in South Africa which started pouring metal in June and will reach full capacity in May 1996.

Looking ahead, many analysts suggest that aluminium might be in relatively short supply for some years even though there is the idled capacity to be brought back and potential for 2m tonnes of new production between 1996 and 1998. They suggest production increases will be held back by the lack of alumina capacity, the essential raw material for aluminium production, and this will have a big impact on Russian producers.

Alcan's Mr Bougie forecasts that growth in demand for aluminium to the year 2000 will be 3.9 per cent, substantially faster than in the past seven years, driven particularly by consumption in Asia and by the automotive industry. However, demand growth for primary, or new, aluminium is forecast by Alcan to rise only at 2.6 per cent, the same rate as in the years 1986-93.

"Recycling, particularly of beverage cans and cars, will play an increasingly important part in metal sourcing to meet demand in future," Mr Bougie predicts. Alcan is forecasting that demand for aluminium in cars will grow at an annual 6.5 per cent until the year 2000. Mr Bougie says much of that growth will come from the increased use of castings which already constitute 70 to 80 per cent of the weight of aluminium in the average car.

"Further significant growth may come after the year 2000 when aluminium body structures are adopted for mass-produced cars," he suggests.

Meanwhile the Russian threat that loomed so large over the industry is fading fast. Mr Huw Roberts of the Brook Hunt consultancy says: "Quite simply, the perceived threat posed by the aluminium industry in the former Soviet Union to world markets – that of a substantial, new and extremely low cost supplier – has largely evaporated."

Car components in aluminium

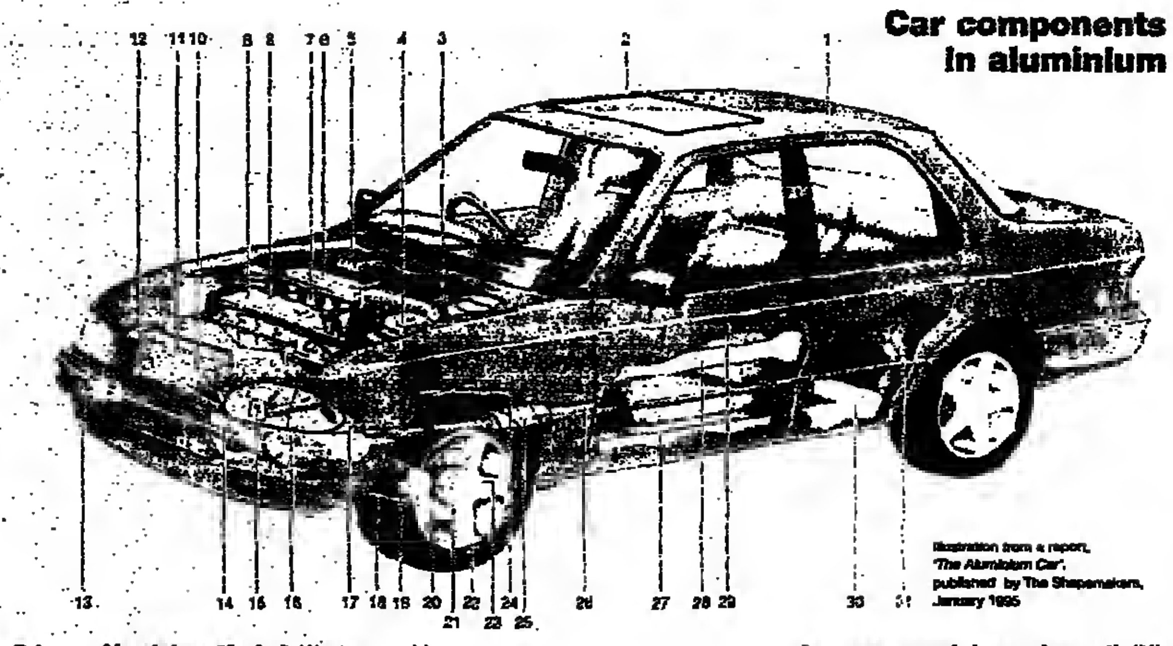
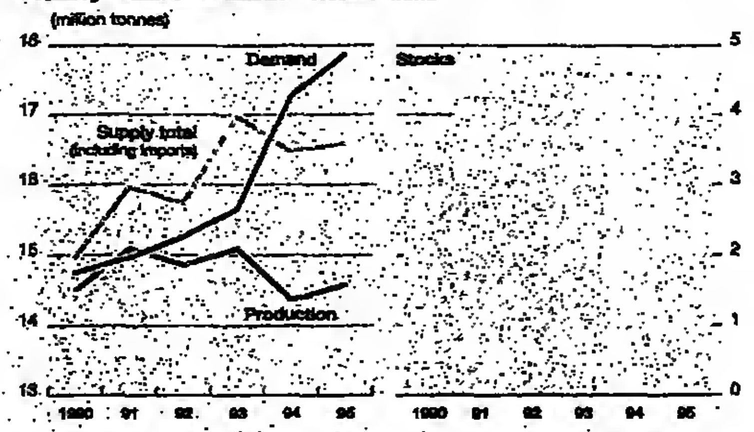


Illustration from a report, 'The Aluminium Car', published by The Shapemakers, January 1995

1 Extruded window channels
2 Extruded sunroof channels
3 Extruded fuel and hydraulic lines
4 Cast brake master cylinder
5 Engine management computer heatsink
6 Extruded fuel rail
7 Extruded intake manifold
8 Cast engine block, cylinder head, pistons
9 AL-MMC valve train components
10 Cast oil pump
11 Rolled and brazed sheet water radiator
12 Extruded water lines
13 Extruded bumper beams
14 Cast sump
15 Extruded tube oil cooler & air-conditioning condenser
16 Cast clutch components
17 Cast transmission housing
18 Forged suspension arms
19 Extruded driveshafts
20 Cast brake calipers
21 Forged hubs
22 Cast wheels
23 AL-MMC brake discs
24 Extruded damper bodies
25 Catalytic converter heat shield
26 Bright trim
27 Extruded seat rails
28 Extruded door beams
29 Pressed outer panels
30 Extruded space frame with cast nodes
31 Pressed inner panels

Primary Aluminium Market: Western world



Average annual demand growth (%)

	1986-1993	1993-2000
By region		
North America	1.4	1.9
South America	2.1	5.8
Asia	6.5	5.3
Europe	2.5	4.0
Western world		
Total	2.9	3.9
Primary	2.6	2.6
By end-use		
Building	2.5	2.7
Cans	4.3	3.6
Transport	3.9	4.5

Source: Alcan

■ **Packaging:** by Neil Buckley

Plastic clouds the horizon

Some fear that aluminium's dominance in established beverage can markets may come under threat

As a "young" material, aluminium has achieved significant penetration of the world packaging market in a short time. Bnt its position could cnme undar threat in some establisbed markets in its biggest packaging sector: beverage cans.

Aluminium's lightness and flexibllity cnmbined witb strength, its foldahility, good barrier characteristics, non-reactivity in contact with liquids, fats and oils, and its abundance and recyclability, all make it a formidable packaging material. Innovative design and effective marketing have enabled it to take share in virtually every type of packaging, and growth is continuing in many areas.

Rolled aluminium is used for barrels and kegs for carbonated drinks, for tubes and bottles for medical preparations, adbesives, skin creams and food conceotrates soch as tnmatn puree. It is used in aerosol containers, for foods and health and beauty products.

Aluminium foil is widely used in wrinkle-walled containers for take-away foods, for caps and closures such as milk-bottle tops, and peel-off lids on dairy products, as well as confectionery wrappers. It is used in laminated cartons, to preserve soups and soft drinks, and on pharmaceutical tablet packs.

New markets are being developed, particularly in aluminium food cans with ring-pull ends, and smooth-walled aluminium foil containers – recently cbosen for a new generation of premium pet foods.

But in no sector has the impact of aluminium been so dramatic as in beverage cans.

Aluminium can volumes worldwide have risen from 5bn units in 1970 to more than 100bn units last year. Aluminium has all but squeezed its competitor, steel, out nf the US beverage can market, and its share nf the UK market is more than 80 per cent.

Beverage cans now account for 20 per cent of all worldwide demand for aluminium. Cans for the US market alone account for 10 per cent of global demand. Over 10 years, aluminium's share of the total US beer and soft drink market, including bnth single-serve cans and larger bottles, grew from 46 per cent to 58 per cent.

But tbe most dramatic growth in that market was in plastic, or polyethylene terepbthalate (PET), whicb doubled its sbare – a fact not unnoticed by the aluminium industry.

Some in tha industry now fear aluminium's dominance in established beverage can markets may come under threat. Three main factors lie behind those fears.

One is the increase in world aluminium prices. The historically low price two years ago helped it to leap forward in market share in markets such as tha UK.

But the CRU International consultancy forecast in a report last month that aluminium ingot prices would rise 40 per cent over five years, while tinplate prices would rise only 15 per cent, and PET resin prices would fall 15 per cent.

That led it to predict that aluminium can stock consumption would fall over the period in the US, Japan and Europe, compared with the 4.5 per cent annual growth achieved in the previous 10 years.

Can stock, CRU concluded, was no longer a young material, but entering "middle age".

Its bypothesis is supported by some leading industry figures. Mr Jean-Pierre Rodier, new chairman of Pechiney, the state-owned French aluminium group, ordered detailed researcb into the aluminium market as part of preparations to privatise the group.

One of tbe conclusions of this research was that PET bottles were likely to overcome some of their problems, which include limited sbelf lifa because of gradual seepage of gas out of carbooated drinks, over the next eight to 10 years. That meant PET was likely to extend its reach beyond the multiple-serving category It already dominates in the US, and challenge aluminium cans' domination of the single-serve market.

Mr Stephen Bettcber, vice-president for can stock sales and marketing at Kaiser Aluminium, warned the International Aluminium Conference in Chicago in September that aluminium cans were in danger of developing an image problem, compared with PET bottles which could now be coloured and shaped.

"The can is perceived as a rather utilitarian package, sbort on innovation of late, that is being sold in the discount aisle of the supermarket – while the younger generation prefer the variety of size, resealability and versatility of the plastic soft drink container," he said.

Apeal was relaunched this year with a BFr60m budget

"The reality is that, to today's youngster, the can is wbat their Dad drank from while he stood in his T-shirt and watered tbe driveway – not the most positive image to a marketer."

A final concern for aluminium can makers may be the determination of the steel industry to market itself better. Back in 1986, Apeal (Association des Producteurs Européens d'Aciers pour l'Emballage) was formed by European steel producers to deal with environmental matters such as European packaging legislation. But Apeal was relaunched this year, with a budget of BFr60m, with a wider brief to carry out market research and promote tinplate as a packaging material.

Its sales pitch says that steel can bodies will cost between 10 and 20 per cent less than aluminium bodies for at least the next 10 years, and that steel prices will be much less volatile than aluminium prices.

It argues that steel, which like aluminium is highly recyclable, will find it easier to reach European Union packaging waste recovery targets because it can be removed from the waste stream cheaply by using magnets, unlike aluminium, which relies on collection schemes.

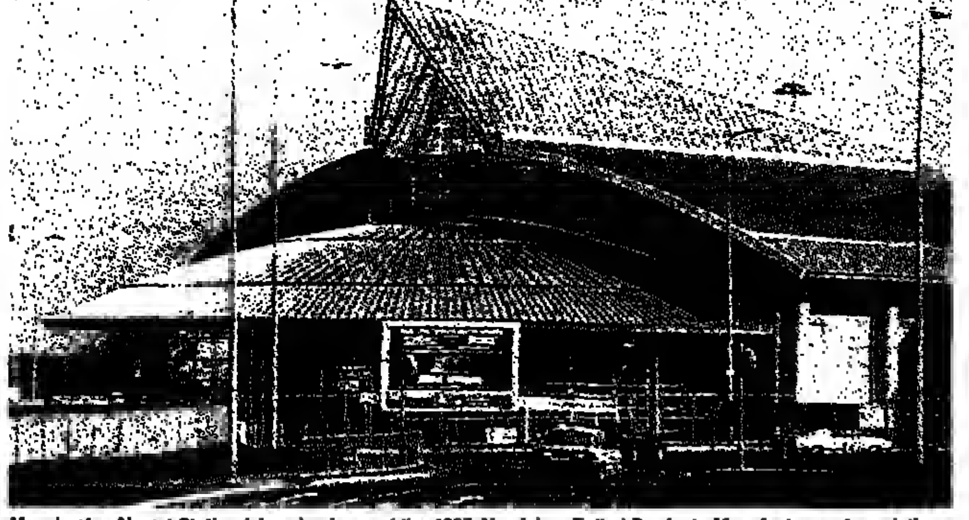
Apeal also plans to persuade can makers to shift to dual-use production lines which can be switched quickly from aluminium to steel and back again as raw material prices vary.

However, any fall in aluminium's share of established can markets should be more than taken up by emerging markets.

CRU forecasts that by the year 2000 consumption of aluminium can stock in Brazil, for example, will rise fourfold to 300,000 tonnes a year. Pechiney is even more optimistic, suggesting that Brazilian unit sales of aluminium beverage cans could jump from 1.6bn in 1993 to 12.5bn by the turn of the century.

CRU also forecasts that can stock consumption in China will triple to 400,000 tonnes a year.

As Mr Bettcher reminded the Chicago aluminium conference, the aluminium can consumption rate in the US, the biggest world market, averages one can for each inhabitant on every day. The world average is only one a week, while in Asia it is one every two months – suggesting enormous potential for growth.



Manchester Airport Station (above), winner of the 1995 Aluminium Rolled Products Manufacturers Association (Arpma) design award, and (right) 40 Douglas Road, London, winner of the 1995 Aluminium Imagination award

■ **Construction industry:** by Richard Mooney

Competition from a range of materials

The long-projected recovery in developed world housing markets has not lived up to expectations

In 1994, according to Canadian aluminium producer Alcan, the building and construction industry was the second-biggest aluminium-using sector in the western world. At 21 per cent of the total, it was close behind transportation (24 per cent) and just ahead of cootainers and packaging (20 per cent). But according to Billiton-Enthoven Metals it had already slipped into third place in the six leading economies – the US, Japan, Germany, France, the UK and Canada.

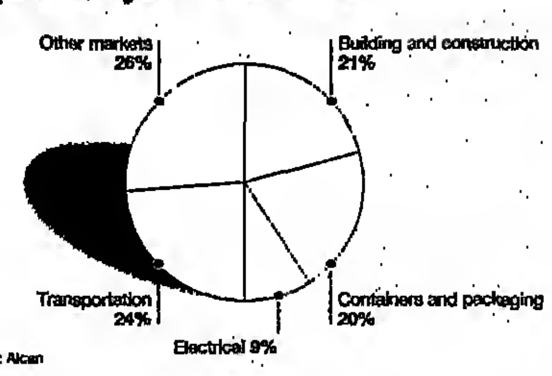
In its 1994 *Aluminium Market Report*, Billiton suggested that aluminium's "relative failure to make significant gains can be explained by the fact that in this sector the metal is used in a number of diverse applications wbere it faces competition from a wide range of other metals and materials.

"Whereas in some of its otber end-uses aluminium [demand] is virtually price inelastic in tha short term, the same cannot be said of tha majority of its applications in the construction sector."

Billiton noted that while the metal was used in heavier coostruction activities such as road building and railway and bridge construction, "its major applications are concentrated in factory and office buildings and private resideotial construction".

In these areas its advantage in lightness is clearly not sucb an overriding consideration as in the transport sector, and it has to compete, partly on cost, with a range of cbeaper materials – in cladding, with timber, coated steel and plastics; in roofing, witb timber, galvanised sheet and lead; in window and door frames, with timber and PVC; and in fencing, with timber concrete and steel.

Shipments by end-use market



Source: Alcan

There are wide geographic variations in economic trends in the construction sector. At the end of the 1985-93 period, sector activity was sbowing net rises of only 9 per cent in the US and 8 per cent in Japan; but in Germany and France it was ahead by 35 per cent and 25 per cent respectively.

The period of rapid growth in the construction sector that began in the early 1980s peaked in 1989 in the US and in 1990 in Japan, and the trend tbeo turned quite sharply downwards. But the growth continued until 1992 in Germany and until 1991 (tbough more slowly) in France (where it had started later).

The picture is further complicated by wbat Billiton described as "non-quantifiable factors" – changes in building regulations and technological developments, for example, not to mention the still more inscrutabla demands of fashlon. Adding to the confusion, said Billiton, were ctimatic considerations and relative ease of availability.

For all that, however, it conclnded that there was "clearly a strong positive correlation between the level of construction activity and housing starts and the consumption of aluminium" within the sector.

For the construction sector as a whole, that correlation is strongest with regard to the US. Within the Organisation for Economic Co-operation and Development's index of construction activity that country is alloted a weighting of 44.3, nearly double Japan's 24.7 and nf a different order of magnitude to Germany's 8.9. France's 7.8, the UK's 7.5 and Canada's 5. In building starts, however, the US has fnr some time sbared dominance with Japan and since 1988 has had to play second fiddle. The 11 per cent fall in the OECD total from 4.5m starts in 1986 to 4m in 1993 more closely reflected the trends in the big two (down 14 per cent in the US and down 11 per cent in Japan) than in, for example, France and the UK, botb down 22 per cent, and Canada, down 32 per cent.

In the US construction sector, windows, doors and screens dominate in terms of aluminium sbipments, at rather more than 50 per cent, the remainder being shared between awnings and canopies (5 per cent), residential sidings (23 per cent, mobile bomes (9 per cent) and hridges streets and highways (9 per cent). In Japan the windows and doors sector has been even more dominant, accounting for between 75 and 80 per cent of total shipments to constructors.

There have been signs of recovery over the past few years hut a return to the rapid growth in the US and Japan of the early 1980s (US starts rose by 37 per cent between 1980 and 1986 and Japan's by 32 per cent between 1980 and 1985) does not appear to be on the cards.

The long-projected recovery in developed world bousing markets has not lived up to expectations and aluminium's participatinn in it has been limited by higher prices resulting from the dramatic reduction in world stocks since leading producing countries agreed early last year to restrain production.

One division of the construction sector does give grounds for cautious optimism in the aluminium industry, bowever, according to Mr Richard Holder, chairman of Reynolds Metals, the world's third-largest aluminium producer.

He pointed out at a conference in Atlanta, Georgia, 12 months ago tbat 200,000 bridges in the US were structurally deficient nr functinnally obsolete. If aluminium were specified in only one third of all bridge repair work or replacement prnjects, at least 400m lb (180,000 tonnes) of extra aluminium a year would be required – equivalent to more than 1 per ceot of world supply – lifting the bridges, streets and highways sector into clear secood place in the US construction industry market for aluminium.

The US was not alone in offering this enticing prospect to aluminium producers. Mr Holder thought. The infrastructure market worldwide offered "tremendous potential", be suggested, because many developed countries were faced with crumbling bridges and highways, as well as leaking water and sewerage lines and ageing mass transit facilities. Meanwhile many developing countries were now creating infrastructure systems.

Aluminium bridges have significant advantages over concrete or steel structures, according to Hydro Aluminium of Norway, another big producer. Hydro's Extrusion Group has supplied about 30 tonnes of customised aluminium extrusions for a road bridge 40m long by 7.5m wide being built near Mosjoen in Norway.

The company lists greatly reduced maintenance requirements and lower weight as the most important benefits, and the lower weight, in turn, permits tbe dimensions of the structural members to be reduced. "The aluminium can also be recycled and re-used wheo the life-time of the bridge is over," adds Hydro.

"Aluminium is also ideal for refurbishing old steel bridges," it says. "Aluminium has already been employad to replace sheet steel bridge decks and has thus reduced the overall weigbt of the bridges to sucb an extent thet the original structural members could be retained and the bridges' capacity extended.

Reynolds also stresses the importance of aluminium's weight advantage in regard to its use for bridge renovation. It says that a typical aluminium deck weighs only about 14 per cent as mucb as a comparable steel-cnncrete deck. This means that "replacement of the sound foundations and steel girders of bridges listed as structurally deficient could often be avoided while meeting needs for traffic load rate increases because of aluminium's light weight".

Installation of an aluminium bridge deck is also much quicker – about seven days on average, Reynold estimates, compared with the usual 30 to 60 days for the steel-reinforced concrete type.

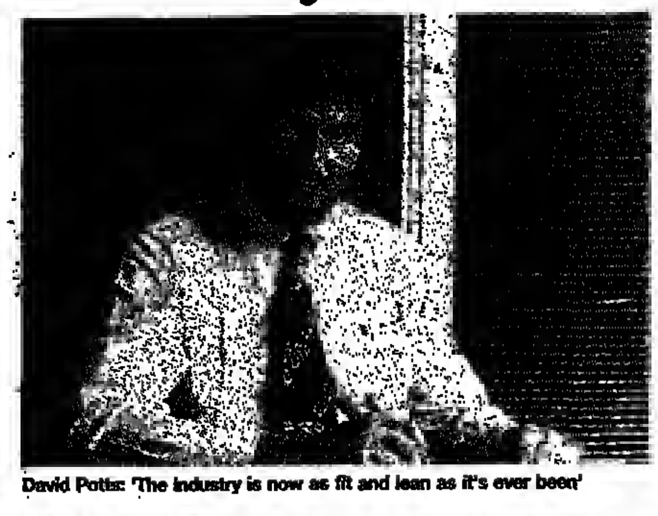
Hydro notes that aluminium hridges bave already proved successful in Sweden and the US. "In Norway," it says, "a number of bridges are planned to span straits up to 124m across. In spite of the aggressive properties of salt water, aluminium hridges do not require any surface treatment."

Other advantages, says Reynolds, are: the elimination of the "cure-time" restrictions involved with construction in concrete; greatly reduced seismic concerns; ease of workability; and heat conductivity.

■ **Stockholders:** by David Blackwell

Slight improvement expected this year

ASA members responded to the recession by rationalising their industry and moving towards added value products



David Potts: 'The industry is now as fit and lean as it's ever been'

Alumininm stockholders should not take a short-term view, but should be confident in their industry, its prodncts and services.

That is the view of Mr David Potts, chairman of the UK Aluminium Stockholders Association (ASA), who is predicting that demand for aluminium will outstrip worldwide smelter production by about 4 per cent next year.

He describes the association's annual meeting last month as "not bullish, but optimistic." He predicts that prices will not fall next year – "in fact there are very good grounds for suggesting that the LME price will regain $2,000 a tonne in the second quarter."

Four years ago the ASA was worried that it was stuck with sales at 1984 volumes but costs at 1991 levels. In 1991, sales of rolled and extruded aluminium ware 103,000 tonnes worth abont £235m compared with the boom year of 1988 when the association's members sold 120,000 tonnes of aluminium worth £266m.

Things have improved – but have still not reached the 1988 heigbts. Last year the industry sold 112,000 tonnes of aluminium worth £256m. A slight improvement in both figures is expected this year.

Consumptinn in the rolled sector, which sells to a wide range of engineering companies, is expected this year to be about 3 per cent up on 1994's 80,000 tonnes.

Demand in the extrusion sector, which makes sections for the building and transport industries, is predicted to rise by a similar level from 1994'a 32,000 tonnes.

ASA members responded to the recession by rationalising their industry and moving towards added value products. Warehouses closed as costs were taken out, efficiency improved and working capital was driven down.

Further efficiancies hava been achieved through a move to full metrication in the rolled sector. "This has been a substantial success story, and is a good example of the European producers and the ASA working together," says Mr Potts. "By the end of 1993 imperial was gona for standard products – withont any edict from Brussels!"

The metrication of extrusions will take longer, although all construction and government contract specifications are now metric. In the general engineering sector, imperial measurements are still quite common.

"Rationalisation is fine – but we must never forget we are a service industry," says Mr Potts. "We will supply imperial as long as there is a damand."

Inavitably jobs have also been shed. Mr Potts estimates that the total employed is now about 1,700, compared with 2,000 three years ago and 2,600 in 1990.

"The industry is now as fit and lean as it's ever been," says Mr Potts. He adds that rationalisation has been taken as far as possible without actually moving into manufacturing: "We don't want to compete with our own customers."

Last year, the distributors were faced with the challenge of a market driven higher by speculative interest. Inevitably, original equipment manufacturers were buying a little more metal than they really needed, Mr Potts suggests, and the stockholders and distributors responded in a similar fashion.

As a result, the distributors ended up with high inventories and the last thing they wanted was the fall in prices following the exit of the speculators in February.

However, he feels that there is now a much more sensible attitude to prices, and that the whole industry is far more visible. This process has been helped by the setting up of a producer liaison committea which is looking at medium and long-term business trends and encouraging a greater level of communications between prodncers, distribntors and consumers.

As a result, the industry, whicb has had to shoulder some of the price risk in order not to deter customers, has become "more responsible in trying to avoid peaks and troughs" on what he describes as "the rollercoaster" at the LME.

Mr Potts is also urging stockholders to keep a steady hand on the tiller. The last tbing they should do is create a spiral of price declina by reducing their inventories too quickly.

The stockholders bave invested a lot of money in becoming metal bashers since the boom years of 1987 and 1988, and most of the aluminium which goes through tbeir hands is processed before it reaches customers. "We are adding more and more value and becoming even more specialised," says Mr Potts.

The aerospace industry now takes 95 per cent of its aluminium parts through the stockholders – and all through just-in-time delivery.

While Mr Potts believes there is plenty of potential to come from aerospace, be looks to the automotive industry for new business. In the US, the amount of aluminium used per car is expected to double to as much as 600lb by the turn of the century – and be expects the UK industry to follow.

هكذا من الأصل

■ **Trains and fast ferries:** by Charles Batchelor

Growing share of transport market

Technological changes in the past few years have prompted a reassessment of aluminium and its increasing use

When it digs into its archives, the aluminium industry can point to some very early uses of the metal in ships. The first recorded aluminium boat has been traced to 1891. The metal's use in railway rolling stock is more recent but London Underground has had aluminium carriages in use since the 1960s.

Even so, aluminium has not been the first choice of material for either shipbuilders or train manufacturers. They have rarely been able to justify the additional costs involved in using the metal, unlike the aircraft industry, where the weight reduction provides a clear advantage in terms of fuel costs and speed.

In the past few years, however, technological changes in both the shipping and rail sectors have prompted a reassessment of aluminium and its increasing use. The introduction of high-speed ferries with catamaran-style bulls and tha growing sophistication of railway passenger carriages have put a premium on light-weight materials.

"Traditional shipbuilders did not know much about aluminium," says John Rogerson, professor of manufacturing quality systems at Cranfield University. "But fast ferries are not built like ships. For them, the strength-to-weight ratio is more critical."

At the same time, railway operators are placing increasing demands on their rolling stock manufacturers, requiring extras such as air-conditioning units which add to the weight of the vehicle.

Traditionally, aluminium has had to compete with mild or carbon steel and stainless steel in most vehicla construction. Steel is cheaper, but mild steel is easily corroded. Aluminium, in contrast, has good corrosion resistance and is lighter than steel but it can be tricky to work.

Employing aluminium to reduce the weight of a ship or a train means that higher speeds can be obtained for the same power output from the engine or that the size of the engine can be reduced while maintaining performance. Weight savings of up to 50 per cent can be achieved by the use of aluminium, according to ther Aluminium Rolled Products Manufacturers Association.

Aluminium is also less likely than steel to continue tearing if it is holed, according to the companies which are ordering high-speed ferries. Their ability to remain afloat has become a topic of great concern following two recent groundings, one off Australia and one off the Channel Islands.

"Locally, you will have a big tear or an indentation but it does not spread," says Mr Tony Corbett, technical manager of Stena Sealink which has offered three 120-metre ferries capable of carrying 1,500 passengers and 375 cars at speeds of up to 40 knots.

On the downside are the finer tolerances required when working with aluminium. "Its biggest disadvantage is the degree of skill required in the welding process," says Mr Corbett. Welders used to dealing with steel, which has a melting point of 1,500°C, must take special care when welding aluminium which melts at 650°C. It is easy to create blow boles and cracking in the aluminium and tight inspection procedures are necessary.

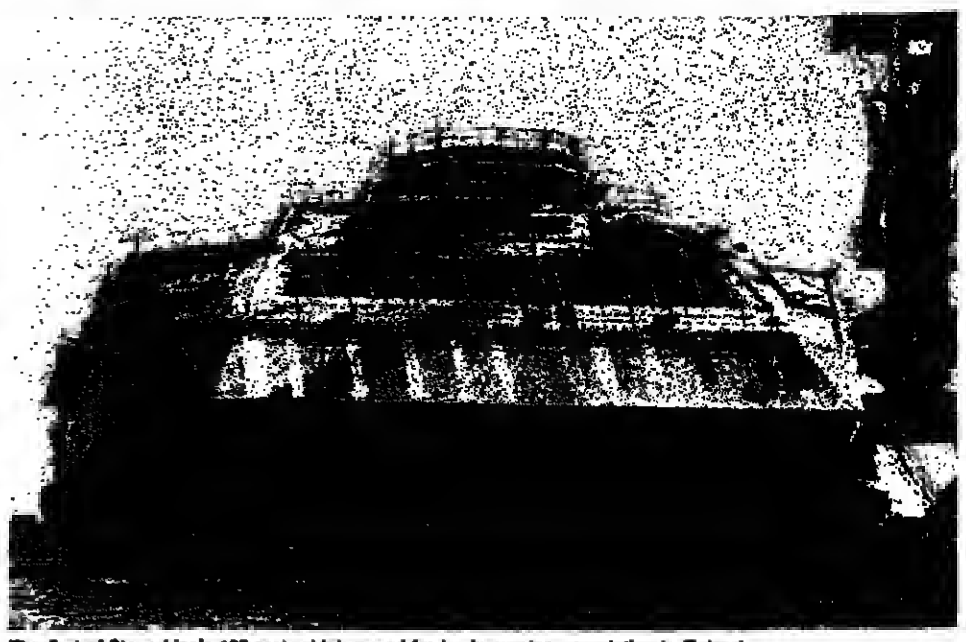
Aluminium's lower melting point has caused concern over its safety in a fire. During the Falklands War, aluminium alloys used in the superstructure of some of the ships which were sunk were said to have caught fire and to have contributed to the loss of the vessels.

In fact, aluminium will melt at high temperatures hot it will not catch fire, the Aluminium Faderation has pointed out. The fires were very probably the result of burning cables and other flamable materials. But the shipping industry is very sensitive to the risks following the loss of the Achilla Lauro, an elderly cruise liner, through fire in the Indian Ocean at the end of 1994.

Aluminium was first used for small pleasure craft and then graduated to fast naval patrol vessels where speed was crucial and cost was less of an issue. In the 1960s it was used extensively in the superstructures of ocean liners. The QE2, built in 1967, has its five top decks constructed from welded aluminium. The metal was also used in the building of liquefied natural gas tankers because of its ability to resist fracturing at tha low temperatures at which tha gas was stored.

In more recent times it has fallen out of favour for use in conventional ships but the growing demand for high-speed craft such as fast ferries, hydrofoils and catamaran motor yachts has opened up new markets.

Over the past decade it has been employed in commercial high-speed craft of increasing size. The high-speed ferries now being built for Stena are the world's largest catamaran vehicle ferries. Of all-aluminium construction, they are powered by gas turbines and propelled by water jet.



The first of Stena Line's 120-metre high-speed ferries is nearing completion in Finland

In the rail sector, it was not until the aluminium manufacturers mastered the problems of producing very large, complex extrusions that it became economically viable to use the metal extensively.

"It was only the Swiss aluminium industry which was prepared to invest in bigger presses and more complex dies," says Mr Dee Razdan, engineering director at ABB Rail Vahicles. The theory was that the large aluminium sections would require fewer welds which would lead to cost savings," says Phil Irving, professor of damage tolerance at Cranfield University. "But in practice the rolling stock manufacturers had a lot of difficulties."

Aluminium's growing share of the rolling stock market could also have foundered on the introduction of a new crash-worthiness test by British Rail. The Hidden report into the Clapham Junction rail crash in south London which killed 35 people and injured hundreds more in 1988 came out in favour of adding crumple zones to the front and rear of carriages.

Steel passed the tests but aluminium proved less ductile – it broke instead of bending under stress. But an alloy was developed which was capable of bending under pressure, allowing crumple zones to be added to the 465 series of Networker commuter trains on routes around London.

Aluminium is taking a larger share of the transport market traditionally dominated by steel. But its future is dependent on the success of the very large high-speed ferries now going into service and, in the UK at least, on the completion of rail privatisation so that train operators feel confident enough to resume placing orders for new rolling stock.

The Hoogovens Groep has designed a floor panel of special extruded aluminium sections to reinforce the chassis of convertibles and reduce weight

■ ***Aerospace applications:*** by Richard Mooney

The key to powered flight

The AIA calculates that aluminium typically comprises about 80 per cent of an aircraft's weight

The aluminium and aerospace industries have been closely involvad with each other almost from the cradle. Aluminium did not emerge as an industrial material until late in the last century and it was still in its infancy when it first took to the skies in 1897 with the maiden flights of Germany's gas-filled airships. These were constructed of aluminium frames, covered with aluminium sheeting.

Six years later the metal's lightness helped to make possible the innovation of powered flight.

The Wright brothers' first aircraft was powered by a four-cylinder, 12 horsepower car engine modified with a 30lb aluminium block.

"Aluminium gradually replaced the wood, steel and other airplane parts in the early 1900s," the Aluminium Industry Association proudly recalls in a recently-published fact sheet, "and the first all-aluminium plane was built in the early 1920s."

The AIA calculates that aluminium typically comprises about 80 per cent of an aircraft's weight. And, apart from its intrinsic lightness, the metal's other chief attraction of corrosion resistance enhances its weight-saving contribution to aircraft construction. The association notes that it allows some airlines to dispense with painting their aircraft, saving several hundred pounds of weight.

In recent years, challenges to aluminium's pre-eminence in certain areas of the aerospace sector have been mounted by component manufacturers using such materials as carbon fibre composites and titanium. Some inroads have certainly been made, but Mr Ray Woodward, co-ordinator of the Aluminium Federation's educational operations, remains confident that aluminium can hold its own.

"It is still the main material for the construction of the airframe of civil aircraft," he told a meeting at the House of Lords earlier this year, "despite the claims made for so-called new materials.

"Indeed, it is no exaggeration to say that without aluminium their would be no civil aircraft."

Mr Woodward was quick, however, to refute any suggestion that the converse might also be true. "Only about 1 per cent of all the aluminium used in the world goes into aircraft manufacture," he said.

"Aluminium is more important to the aircraft industry than that industry is to aluminium."

He suggested that this might be "a point to remember when government funding for future developments is being considered."

■ **Car industry:** by Kenneth Gooding

Alcoa seeks a partnership

The steel industry is now taking the potential competition from the aluminium producers very seriously indeed

Alcoa is prepared to spend $1bn or more on a partnership with any manufacturer wanting to produce the first high-volume cars using its revolutionary aluminium spaceframe bodies.

As the world's biggest aluminium company, Alcoa has a vested interest in tha industry's determined attempts to make sure that "all-aluminium" cars are the norm, not a rarity, after the year 2000.

The US group already has been down a similar route. In partnership with Audi, the Volkswagen Group's upmarket subsidiary, it helped to develop the Audi A8, the first production car to use aluminium as its primary production material.

During 12 years of co-operation, Audi spent about DM1bn and Alcoa spent $70m on a plant at Soest in Germany where it is producing spaceframe components.

This project was prompted by increasingly stringent regulations covering both car fuel economy and emissions. This is a global trend, but is strongest in developed markets such as the US, western Europe and Japan.

Both requirements can be met by lighter vehicles and, as customers are resisting any attempts to make cars much smaller, designers are focusing on lighter materials to replace steel and plastics.

Alcoa and Audi believed that, because aluminium is initially much more expensive than steel, it would be too expensive simply to substitute aluminium components for those traditionally made of steel. Instead, they designed a car that has many fewer individual components and structures than are used in a steel vehicle.

They developed a spaceframe, a skeleton-like body structure, composed of fewer than 100 extrusions and castings, compared with as many as 300 for a stamped steel body.

The partners had to develop new manufacturing processes to produce these spaceframes, and new aluminium alloys were also developed.

However, at present, the Audi-Alcoa technology is not economically viable for cars produced at a rate of more than 100,000 a year. Audi hopes to sell about 20,000 of its A8s a year and, even if its forecast that at least 10 cars using aluminium spaceframe bodies will be in production and filling soma small market niches five years from now, this will not create the huge extra demand from tha motor industry that the aluminium producers hope for.

Aluminium used in a typical US car has grown from 50lb in the 1960s to nearly 200lb today. Most of that extra aluminium has been used in components once made of steel or cast iron. There is still growth to come from this substitution process.

Mr Fokko van Duyne, chairman of the European Aluminium Association, says that a review of various forecasts by his association suggests present aluminium use in cars worldwide is about 65kg per vehicle, representing about 2.2m tonnes of the metal a year.

By the year 2000 this average is widely predicted to move up to 115kg per car and a total of 5m tonnes. None of that assumes any substantial use of aluminium for car body structures or panels.

It is no wonder that the steel industry is now taking the potential competition from the aluminium producers very seriously indeed. A consortium of 32 of the world's steel companies, working with Porsche Engineering, the North American offshoot of the German carmaker, are investing $20m over two years to build demonstration car bodies to prove that their previous efforts to design and engineer a light-weight steel car has commercial possibilities.

The initial phase of the so-called Ulsab (UltraLight Steel Auto Body) project resulted in a new car body concept that – the steelmakers claim – promises to reduce the weight of the body structure by as much as 35 per cent, lower costs by 14 per cent and improve rigidity by as much as 132 per cent compared with today's four-door, mid-sized cars.

In presentations to carmakers, the steel industry is stressing the negative aspects of the all-aluminium car, suggesting, for example, that aluminium is likely to be more expensiva to repair, that aluminium needs special joining methods that makes its use in car manufacture complex and costly; and that aluminium is less suitable for forming into car body parts such as doors because it has a greater tendency to spring back out of shape once it has been formed.

> Aluminium alloys need careful processing

The steelmakers also stress that the availability of coated steels has reduced aluminium's corrosion resistance advantage and that, when being recycled, aluminium alloys need careful processing, and the use of costly and inconvenient methods to avoid downgrading the material.

Nevertheless, no car manufacturer can afford to ignore tha potential offered by aluminium. For example, Ford, the world's second-largest automotive group, and Alcan, the second-largest aluminium producer, balieve they hava overcome most of the problems associated with producing aluminium cars from an infrastructure which was set up to make them from steel, thereby avoiding the need for large-scale investment in new plant and equipment.

Ford has a fleet for 40 "aluminium-intensive vehicles," based on the Mercury-Sable range, on trial in the US – a project that gives a clear indication that aluminium is suitable for the production of high-volume rather than just low-volume, nicha cars.

Alcan has invested $140m in the development of materials and enabling technology for the AIV. "Aluminium is the only material with the availability, properties, characteristics and infrastructure capable of delivering the weight savings needed by the automobile industry," insists Mr Jacques Bougie, Alcan's president.

Mr Paul O'Neill, Alcoa's chairman, says his company's technical peopla believe that it is possible to use aluminium in low-priced cars, not just for producing luxury models. "We are at the very early stages of learning how to do that cost effectively and efficiently."

He acknowledges that car designers are worried about the high price of aluminium compared with steel and even more by the volatility of aluminium's price on the London Metal Exchange. However, he points out that the volatility can be smoothed by long-term pricing arrangements, such as Alcoa has been using for many years in its dealings with the aircraft industry, one of its biggest customers. And, he says, "Our technologists believe that it is possible – if we are permitted to work with [the automotive industry] in an integrated partnership way – to deliver a cost aquivalent aluminium alternative to steel."

Mr O'Neill stresses two factors, however. He says that any long-term price contracts have to provide replacement cost prices for the aluminium supplier. "We cannot agree to giveaway prices."

Secondly, "I'm not interested in spending $1bn or any other significant amount for the fun of it or for the technological excitement. We at Alcoa are truly prepared to commit substantial investments to work with an automotive company that is seriously interested in accelerating the rate of improvement and use of this spaceframa technology and that also believes it is necessary to make money."

The electric Hotzenblitz from Germany uses an aluminium spaceframe

■ **Problems in Russia:** by Kenneth Gooding

Mafia linked to smelter deaths

Crime in Russia has risen even more sharply than aluminium exports since the collapse of the former Soviet Union

Russian businessman Mr Felix Lvov was kidnapped in September while on his way to Almaty in Kazakhstan and shot dead. Mr Oleg Kantor, a Russian banker, was found with his throat cut in his country house in July. His bodyguard was dead et his side. The Russian Press linked the killings to the men's activities in the aluminium industry.

Another victim, Mr Vadim Yafyasov, murdered in central Moscow in April, was said to be vice-president of the Yugorsky commercial bank and also deputy director of the Krasnoyarsk aluminium smelter in Siberia.

Russian newspapers suggested his death might be connected with the attempt on the life of Mr Valery Tokarev, commercial director of the Sayansk aluminium smelter who was seriously wounded in the bead in April and whose two bodyguards were shot dead.

You do not have to look very hard to find circumstantial evidence thet the Russian mafia (the Federation's organised crime syndicates) have moved in on the aluminium industry. "Where there is big money to be made in Russia, you will find the mafia. And the smelters have made big money in tbe past," said one western official wbo, for obvious reasnns, preferred not to be named.

Last year, the Russian smelters exported about 2m tonnes of aluminium wortb about $3bn and the Russian Press has hinted that tbe aluminium industry-related deaths were the result of battles for control of smelters or alumina [the raw material for aluminium production] refineries. The western official agreed: "There is rivalry over ownership. And if you do not follow the mafia's rules, then you put yourself at risk."

Crime in Russia has risen even more sharply than aluminium exports since the collapse of tbe former Soviet Union in 1991. Russian bankers are usually escorted by bodyguards but even so 16 of them *were killed last year. Also in* the past year nine of the 30-strong committee of the Russian Business Round Table (KSBR), a body grouping 270 business associations across the Federation, have been killed.

In these circumstance, we should not be surprised that there has been no rusb by big western aluminium companies to take e stake to the Russian industry. However, the reasons they give for this apparent lack of interest usually focus on the lack of an adequate legal structure in Russia and the difficulties in establishing ownership rights. Westerners are usually too polite to mention tha crime wave in public.

> Some smelters could soon be facing insurmountable cost pressures that might force them into bankruptcy

While the western aluminium producers can stay away for the time being, the Russian industry would be lost without the trading houses that supply raw materials such as bauxite, alumina and pitch coke in return for the aluminium that they can import to the west.

For example, Trans-World Metals, the London-based international trading company, in 1992 helped "kick start" production at two Russian smelters by providing cash to improve the flow of alumina, an essential raw material. Trans-World also tovested in port facilities in the far east of Siberia.

In order to protect its position as the industry was privatised, Trans-World organised a consortium, with its Russian partner Trans-Cis and related companies and funds, to acquire dominating shareholdings in four smelters: Bratsk (the world's biggest with 850,000 tonnes a year capacity); *Krasnoyarsk (760,000 tonnes);* Novokuznetsk (280,000 tonnes); and Sayansk (320,000 tonnes).

Subsequently, Trans-World suffered in Russia's free-wheeling, unregulated, over-the-counter market, when its holdings were deleted from Krasnoyarsk's share register. Trans-World's associates are having to fight for restoration through the courts.

This is something of a long shot because Mr Mikhail Yukov, first vice-president of the Supreme Court of Arbitration, admitted in an interview with the Reuter news agency recently that: "This share business is too complicated for us. We don't understand lt. We have no laws to deal with it. Our laws don't answer new questions. We are paralysed."

To add to the problems, Mr Yukov said, judges in his court had been given guns to protect themsalves against criminal gangs that *had penetrated* to the core of Russian business.

Crime is not the only worry for the Russian aluminium industry. Some smelters could soon be facing insurmountable cost pressures that might force them into bankruptcy, according to many observers.

For example, Mr Huw Roberts of the Brook Hunt consultancy, said recently that whila the Siberian smelters were protected by the relatively low energy costs in their region, plants elsewhere were suffering from big power price increases, outdated technology and high manning levels.

He said the industry's most pressing difficulties sprang from the determination of the Russian authorities to stabilise the value of the rouble against the US dollar et e time when inflation was still running at 6 to 7 per cent e month.

"This, coupled with higher charges for alumina, has shaved margins to the bone. Our analysis suggests that the typical gross profit on toll smelting in Russia, assuming spot rates for alumina purchases but excluding any costs associated with financing, has shrunk from $520 a tonne in December last year to just $70 a tonne in May."

Mr Roberts insisted that the Russian industry had missed *its opportunity* to *modernise* quickly because many western companies had tired of "the seemingly endless negotiations whicb have led to uncertain conclusions" ebout modernisation projects.

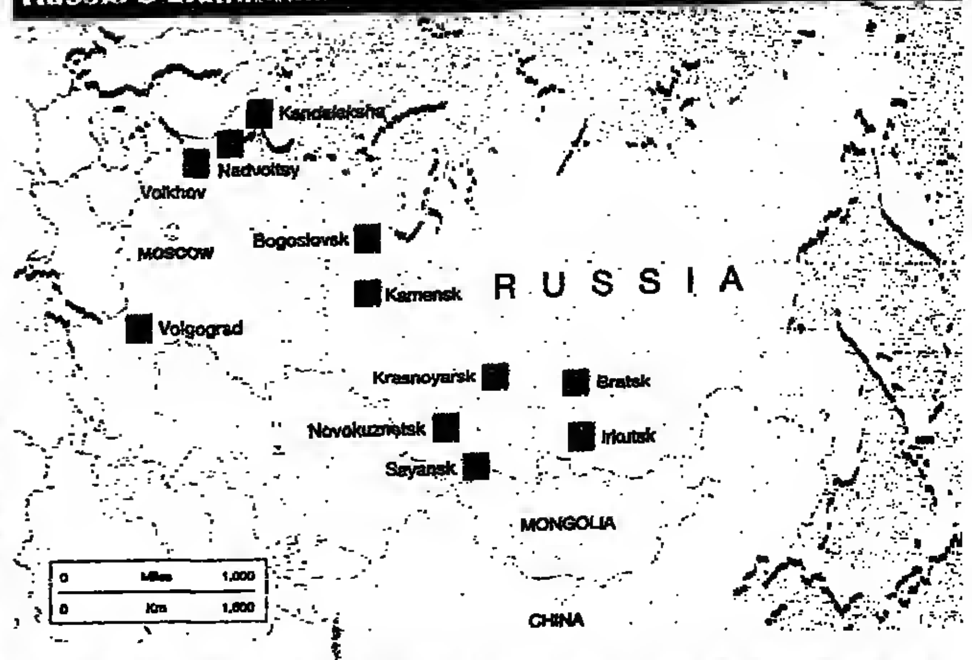
"Quite simply, the perceived threat posed by the aluminium industry in the former Soviet Union to world markets, that of a snhstantial, new and extremely low cost supplier, has largely evaporated."

Dr Horst Peters, managing director of VAW Technologie, the German group thet is helping to modernise the Novokuznetsk smelting complex in Siberia, has an equally depressing view of the Russian industry. Very few of its bauxite or bauxite substitute deposits are competitive with those elsewhere in the world, he suggests, and its alumina refineries are old and worn out with production costs nearly three times those of the most competitive refineries in Australia.

Russia's smelters are "physically outdated, using obsolete technology with unattractive technical parameters. These smelters do not meet existing pollution standards. If existing Russian environmental laws were enforced, nearly all the smalters would have to reduce production substantially or be closed down."

Western producers suffered greatly when, starting in 1990, a flood of Russian aluminium – rising from 500,000 tonnes to about 2m tonnes to 1994 – pushed prices to their lowest levels. Dr Peters suggests that the danger of increased exports from Russia is fading, only to be replaced by a danger that present Russian output might not be sustained, leaving the world temporarily short of aluminium.

Russia's aluminium smelters



The London Metal Exchange: the movement of fund money is a new factor for the base metals markets

Pictures: Tony Andrews

■ **London Metal Exchange:** by David Blackwell

Learning to live with funds

The identity of the funds, which have had such an impact on the LME over the last past couple of years, is not easy to pin down

The aluminium industry must learn to live with a new factor influencing prices at the London Metal Exchange – the funds.

These mysterious bodies always eppear in news stories when price movements are not easily explained by the market fundamentals. Last year the price of three-month aluminium climbed steadily, although for most of the time stocks at LME warehouses were above 2m tonnes.

The rise carried through into January this year, when for a heady four weeks three-month aluminium was above $2,000 a tonne. Warehouse stocks had *started to fall early* in *November* 1994, retreating below 2m tonnes for first time stoce August 1993. But instead of prices being supported by an eccelerating decline in stocks – last week they stood at just 534,450 tonnes – tbe market started to decline.

Three-month aluminium hit its peak of $2,187 a tonne on January 24 as LME warehouse stocks fell below 1.8m tonnes. Only a fortnight later the metal was back below $2,000 a tonne – a level which is now a fading memory. The blame was placed firmly on the departure of "the funds."

The identity of these funds, whicb have had such an impact on the LME over the past couple of years, is not easy to pin down. Mr John Martin, of tha CRU International consultancy organisation, believes there are three types – commodity trading advisers (CTAs), bedge funds and institutional investors.

Between them they put nearly $10bn into base metals markets last year. About 25 per cent of the money went into the aluminium market, adding about $600 a tonne to aluminium prices et their peak early this year.

Mr Martin thinks that the hedge funds, which favour the more anonymous over-the-counter market over the visibility of the LME, are the most important of the the three types. They are more likely to want to speculate against an average month, or a basket of metals, and will trade through a bank or a broker rather than take np an LME contract, which is tied to a specific day.

The hedge funds – the most famous of which is Genrge Soros' Quantum fund – appear to be more patient *for their* profits, being willing to lock up their capital for longer periods. to contrast the CTAs tend to be computer-drivan followers of price trends.

Hedge funds also look at the fundamentals of the markets. Early last year they concluded that aluminium was e sure-fire winner. Western world demand was well ahead, and there was a lot of restocking activity.

At the same time some of the leading banks had tied up a large amount – perhaps up to half – of the LME stocks. They used cheap money to buy spot metal and sell forward at a guaranteed profit, and the funds knew that tha metal would be unavailable to the market until the financing deals were unwound.

Further, the aluminium producers had signed an unprecedented international trada agreement in February 1994 to cut production.

"Prodnction was going to fall, there were optimistic growth forecasts for the US, and they knew thet some of the stocks were tied up," says Mr Martin. "It was a one-way bet."

The funds were also ahead of the game, so that prices rose well before stocks started to fall. Speculative froth is always expected when stocks get too low, but this time the speculators came into the market while stocks were high.

But in February the funds pulled out, immediately knocking $300 off ths price. The funds are mainly based in the US, and the bond and equity markets were proving more attractive.

Tbe movement of fund money is not new in commodity markets – gold, for example, has always been susceptible. But it is a new factor for the base metals markets. Copper has been affected as well as aluminium.

Tha funds are quiet now in tha face of e depressed outlook for the US and low forecasts for aluminium demand. However, Mr Martin believes they will now need to be constantly taken into consideration by tbe base metals markets, even if they are not alwsys present.

"They are a factor to tbe market – but they might not be there all the time. The aluminium industry has to live with it," he says.

But be points out that their presence could provide opportunities for both sides of the industry. If the price is $300 above where it ahould be, perhaps producers should lock in, he suggests. Conversely, consumers should lock in on the lows.

> The funds are quiet in the face of a depressed outlook for the US

He also suggests that producers might have to accept soma of the price risk themselves because of increased volatility. Some users of the metal – such as the car industry – could be turned eway from the metal if pricing becomes too unpredictable.

The rise nf about $150 a tonne in three-month prices to July and August could have been partly caused by tbe activities of commodity trading edvisers, who spotted that the price decline was starting to flatten out. The price quickly came down again, bnt any consumer trying to pnt a hedge on paid *$150* more than they would have dona hed they waited.

The theory always put forward by the LME has been that the more the market is traded, the less volatile prices will be.

"My view is that the funds will make the markets more volatile – but I can't prove it," says Mr Martin.


LME dealers: prices rose well before stocks started to fall

هكذا من الأصل

هكذا من الاصل

FINANCIAL TIMES

COMPANIES & MARKETS

Wednesday November 1 1995

IN BRIEF

Body Shop couple in buy-back talks

Anita Roddick (left) and her husband, Gordon, founders of Body Shop International, are in discussions with bankers over buying back the UK-based green cosmetics group – though the board said it had received no proposal from the Roddicks, and expected no such proposal "in the near future, if at all". The Roddicks, who floated the business 10 years ago, have held preliminary discussions with their bankers on turning the business into a charitable trust, although no agreement has been reached yet. Page 24

KLM falls but stands by forecast
KLM Royal Dutch Airlines said the recent resumption of tax charges and pension premiums caused net profits to fall nearly 15 per cent to Fl 302m ($192.4m) in the second quarter of 1995-96. But the carrier stood by previous forecasts that full-year results would show a slight improvement. Page 18

DSM surges to Fl 234m in third term
DSM, the Dutch chemicals group, reported a 105 per cent surge in third-quarter net profits to Fl 234m ($149m), prompting the company to predict that its full-year result would also be about double that of 1994. Page 18

Paramount studio fall restrains Viacom
Viacom, the US media group, reported strong growth in revenues and cash flow at its Blockbuster and MTV subsidiaries, largely offset by lower results from the Paramount film studio. Page 20

Sony shares slip on inventory worries
Sony, the consumer electronics and entertainment group, has suffered a sharp fall in its share price because of concerns over rising overseas stocks. The company's shares have dropped 11.5 per cent in the past six trading days. Page 21

Japanese airline sales take off on high yen
Strong demand for overseas tourism as a result of the soaring yen led to higher sales for Japan's leading airlines in the six months to the end of September. Stiff competition, however, limited improvements in profitability. Page 21

MEPC to quit Europe for US property
MEPC, the second largest UK property company, signalled a shift in strategy by announcing the proposed acquisition of £198m ($312.8m) of US properties and its intention to withdraw from continental Europe. Page 22

Thames Water rules out electricity bid
Thames Water, the UK utility, quashed speculation by ruling itself out as a potential bidder for London Electricity. However, it revealed that it was in discussions with the power company which could lead to a joint venture. The company reported a 10 per cent increase in interim pre-tax profits to £165m ($260.7m). Page 24

Companies in this issue

Market Statistics

Chief price changes yesterday

FRANKFURT (DM)			
Rises			
GEHE	691	+	10.5
Lufthansa	195.8	+	5.8
Porsche	655	+	33
Rheinmetall Brln	302	+	7
Falls			
Goldschmidt	590	–	19.5
Thyssen	253.3	–	7.5
NEW YORK ($)			
Rises			
Boise Cascade	37	+	2½
Gucci	30	+	2
Tom Hilfiger	37½	+	4¾
Total Renal	18¾	+	4¼
Falls			
ISS Intl Svc	10	–	2
Three Five Sys	17¾	–	1½
LONDON (Pence)			
Rises			
Body Shop	158	+	21
Le Creuset	177	+	18
Unigate	508	+	54
Falls			
Hi-Tec Sports	28	–	4
Life Sciences	86	–	38
Sera Food	51	–	14
TORONTO (C$)			
Rises			
Camеco	42⅝	+	2⅜
Millronics	34	+	2¾
Power Fin	31⅛	+	1⅞
Softkey Softw	48	+	3
Trimark Fin	36⅝	+	2
Falls			
Bandeo Bancp B	12⅛	–	1⅛

PARIS (FFr)			
Rises			
Lille-Bonnieres	1818	+	169
SGTE (Cie Fin)	620	+	108
UAP	127	+	5.5
Falls			
Arbed	452	–	69
Legardere	91.3	–	3.5
Odet Fin	133.4	–	65.8
TOKYO (Yen)			
Rises			
Asics	275	+	13
Chiyoda	651	+	61
NTN	625	+	28
Npn Light Metal	554	+	29
S'tomo Bakelite	838	+	38
S'tomo Realty	672	+	35
HONG KONG (HK$)			
Rises			
Dickson Cncpt	5.6	+	0.45
HK Ferry	8	+	0.3
Winsor Inv	3.1	+	0.3
Falls			
ITC Hldgs	1.69	–	0.1
Shell Elec Mfg	2.575	–	0.1
Yip's HC	1.2	–	0.08
BANGKOK (Baht)			
Rises			
Bangkok Ins	410	+	30
Mutual Fund	592	+	36
Phatra Ins	170	+	10
Songkla Canning	47	+	3
Falls			
Adkinson Sec	60	–	3.5
Royal Ceramic	42	–	3.75

New York and Toronto prices at 12:30.

Pilkington cash call to fund takeovers

By David Wighton in London

Pilkington, the UK-based glass manufacturer, yesterday announced plans to strengthen its market position in Europe with two acquisitions funded by a £303m ($479m) rights issue.

Pilkington is paying £120m to take full control of SIV in Italy which will make it a close second to France's Saint Gobain in tha European automotive glass market. It is also paying £55m for glass processing and distribution businesses in Scandinavia and Switzerland.

The UK concern, in partnership with Techint, an Italian-Argentine investment company, bought SIV from the Italian government in 1993. Having paid £44m for a 50 per cent stake, Pilkington is acquiring the remainder for £120m and will consolidate SIV's net debt of £68m.

The moves were welcomed by the City of London. Pilkington's shares rose 7p to 189p, helped by the announcement of a 70 per cent rise in first-half profits in £104m before exceptional items.

Mr Nigel Rudd, who took over as chairman from Sir Antony Pilkington in July, stressed the rights issue was not being used to repair Pilkington's balance sheet, which had been weakened by diversifications and heavy capital investment.

"These are earnings enhancing acquisitions which reinforce the company's position. The rights issue will not reduce the pressure on the management to cut the company's borrowings," he said. Pilkington announced plans to accelerate investment in high growth markets in South America, eastern Europe and China. But it will not be increasing capacity in western Europe or the US.

By taking full control of SIV, Pilkington will be able to integrate its low-cost, well-equipped plants in Italy and Spain into its European operations. Mr Roger Leverton, Pilkington's chief executive, said some products made in Pilkington automotive glass operations in the UK and Germany may be transferred to SIV. He said production of some of SIV's complex products may be moved to northern Europe.

The acquisition of the distribution and processing operations of Interpane, a private Swiss-based company, will lift Pilkington's market share in 46 per cent in Scandinavia and 18 per cent in Switzerland.

Lex, Page 16; Results, Page 22

Eurotunnel claim dismissed

By Charles Batchelor, Transport Correspondent and John Ridding in Paris

A £2.5bn ($3.95bn) claim by Eurotunnel against British Rail and SNCF, the French railway, was dismissed yesterday by an international tribunal in a setback for the debt-laden company.

Eurotunnel, operator of the Channel tunnel and of car and truck "shuttles", had been seeking additional payments from the two railways for the use they make of the tunnel for Eurostar passenger and international freight services.

Two subsidiary claims by Eurotunnel are to be examined by experts. But yesterday's 220-page ruling, by the arbitration tribunal of the International Chamber of Commerce in Paris, represents a reverse for the company, which was forced to order an 18-month moratorium on interest repayments in September because of the weight of its debts.

Eurotunnel had been attempting to force the renegotiation of the usage contract, whereby the company is paid on the basis of the number of passengers taking trains through the tunnel. Failing renegotiation, Eurotunnel wanted a 55 per cent increase in payments or a lump sum of £2.5bn. "We are disappointed," said Eurotunnel. "But it is a huge document and this is a complex decision. It will take time to digest in its entirety. We may be able to claim certain damages for tha lateness of the delivery of trains and delays in completing the BR infrastructure."

Sir Alastair Morton, Eurotunnel co-chairman, is also seeking compensation from other parties involved in the project. In September, he claimed an additional £1bn from the TML consortium which built the tunnel because of over alleged problems with tha tunnel and its rail systems.

British Rail said that the Paris tribunal had "totally disallowed Eurotunnel's major claims ... which were based on the contention that the railways should contribute to the costs of Eurotunnel'e own cost overruns and delays".

Mr André Jean-François Bénard, SNCF's managing director, struck a conciliatory stance over relations with Eurotunnel, claiming that the rail companies and the tunnel operator had a common interest in developing the traffic using the tunnel.

Eurotunnel's shares closed down 1p at 95p yesterday ahead of the news.

Media groups set to unite for global sports network

News Corp, headed by Mr Rupert Murdoch (left), and Tele-Communications Inc, led by Mr John Malone (right) are expected to announce a venture for an international sports television network. News Corp owns the rights in broadcast National Football League games. Story, Page 20

AEG confirms two divisions for sale

By Wolfgang Münchau in Frankfurt

AEG, the German industrial group and subsidiary of Daimler-Benz, confirmed plans for the sale of two large divisions, marking the latest stage in a programme to divest unprofitable operations.

The announced sale has raised questions whether AEG, a company from the first generation of Germany's industrial revolution in the late 19th century, will survive as a single operation, or whether the remaining operations will be brought into other Daimler-Benz companies.

Mr Ernst Georg Stöckl, chairman, said the company was in talks with GEC-Alsthom, the Anglo-French engineering group, and two other unnamed European companies over the sale of its energy and automation divisions, which have a combined turnover of DM2.5bn ($1.8bn). He said the talks were "at different stages of progress".

Mr Stöckl yesterday said the sale had become necessary because of mounting competition in business areas which Daimler-Benz no longer defines as core operations. The energy division operates near break-even point, while the automation division is loss-making.

The announcement has raised fears among AEG's workforce that Daimler-Benz is planning job cuts on a scale similar to those at Daimler-Benz Aerospace. Employee representatives yesterday attacked Mr Stöckl for having failed to inform the workforce about the pending "sell-out" of AEG. "We consider this bad leadership style, marked by insensitivity towards the workforce."

Among AEG employees it is considered "virtually certain" that it will cease to exist as a single unit and its remaining subsidiaries will be brought under the auspices of other Daimler-Benz companies, notably Mercedes-Benz, the car and truckmaker.

This was forecast in the summer in a leaked letter written by Mr Gerhard Liener, who retired as finance director of Daimler-Benz this year. Whether the company survives as a single unit, or whether its activities will be regrouped, the name AEG is almost certain to disappear.

Mr Stöckl said: "If we tighten our business operations, we will also evaluate our corporate administrative structures. But I stress that these considerations have not yet been discussed in the boards of AEG Daimler-Benz Industrie."

He confirmed that three of its divisions have been earmarked as core operations: the railway rolling stock business, which AEG has brought into a joint venture with ABB, the Swiss-Swedish industrial group; Temic, the microelectronics unit; and MTU, engine manufacturer.

● Siemens, the German electronics company, confirmed that co-operation plans with GEC Alsthom for the joint marketing of a high-speed train in Asia could be signed before the end of the year.

Eni opens sell-off campaign in London

By Andrew Hill in Milan

The international roadshow for the L10,000bn ($6bn) sale of Eni – the biggest in the short history of Italian privatisation – begins in London today, following yesterday's presentation to Italian banks and analysts in Milan.

Eni, Italy's state-owned energy and chemicals group, and the Treasury must convince international investors that the sale of a minority stake in the company is attractive enough to overcome the continuing political uncertainty in Italy and recent blows to the reputation of the Italian stock market.

The Treasury hopes to sell 17-24 per cent of Eni'e share capital, for L5,250-L6,000 a share.

Mr Lamberto Dini's technocratic government only narrowly survived a vote of no confidence in the Italian parliament last week, and has promised to resign by the end of the year. Against such an uncertain political backdrop, international investors are likely to press for a generous price for Eni shares.

However, at a press conference after yesterday's presentation, Mr Franco Bernabè, Eni's managing director, tried to distance the company from the unstable political situation. "I think that this privatisation is an example of an Italy that works. It shows that things can be done here, and it'e an example of great coordination between all those involved," he said.

Mr Bernabè pointed out that Eni was one of the world's eight largest oil and gas companies in terms of reserves and turnover, and the fourth largest in terms of profitability.

He said he was unable in give any precise forecast of 1995 and 1996 results, because of the strict rules governing US share flotations, but analysts believe the prospective price/earnings ratio for the company will be around 10 or 11. Eni is seeking a listing on the New York Stock Exchange, as well as in Milan. The offer opens on November 21.

Mr Mario Draghi, director general of the Treasury, said the proceeds of the Eni sale would be used to reduce Italy's looming public debt, by buying back government bonds, improving the country's economic credibility.

The Treasury is not allowed to sell off a second tranche of Eni for at least nine months, but Mr Draghi streseed the process would not stop after the initial flotation.

Six-legged dog, Page 15

Barry Riley

Splitting headaches in the debt markets

So Quebec stays in Canada, but perhaps only for the time being. In place of a clean divorce there is the prospect of lingering mutual suspicion. At least the prospect of global bond investors finding a small part of their portfolio suddenly denominated in a *franc quebecois* has receded.

The Canadian crisis has represented an odd inversion of the bigger debate over the monetary future of the European Union. A near-majority in Quebec wants to leave Canada, and although there is talk about retaining the Canadian dollar, that would seem to be unrealistic.

The only partially hidden agenda is that economically weak Quebec would like to shed as much as possible of its responsibility for the federal Canadian debt. Adding, say, a quarter of the federal debt to Quebec's own provincial indebtedness would take the total to over 100 per cent of gross domestic product.

Bond investors worry that not only will they become victims of the apparent trend towards balkanisation, but that the growing debt burdens around the world will encourage nationalist minorities in walk away.

In the EU there is controversy over the moves towards political federation. In this case, some of the keenest integrators are the financially stretched states such as Italy and Belgium, which hope to bury their debt within a much bigger pool denominated in the common eurocurrency.

An independent Quebec would represent a new currency risk as well as a continuing credit risk. In contrast, if the weaker European states managed to negotiate their way into a currency union then the inflation (or devaluation) part of their bond market risk would be subsumed within the broader *euro* market, but sovereign risk would remain. In theory Italy, for example, could restructure its debt, regardless of the common currency.

Indeed, Italy would have a strong incentive to restructure within a monetary union, because holders of its debt would be presented with a windfall

> The Canadian crisis represents an inversion of the bigger debate over the monetary future of the EU

gain, through the prospect of being repaid in euros rather than devaluation-prone lire. The reverse side of that coin would be that the burden of servicing Italy's debt – which costs over 11 per cent at the long end – would reach crippling levels, and the country would no longer have the option of inflating its way out of the problem.

However, most of the Italian national debt rolls over within a few years, and could be refinanced at much lower rates within a monetary union. The opposite problem would be faced in Germany, where bond investors have been switching into Swiss francs rather than face the prospect of being repaid in euros of uncertain pedigree. Longer-dated bunds would sink to a large discount and the German government would in theory benefit temporarily from windfall gains as higher inflation eroded tha real cost of servicing its debt. Refinancing, however, would be at higher rates – both nominal and real.

Such transitional problems could only be avoided by changing the coupons on debt expressed in individual currencies on EMU day, to harmonise them with euro levels. But it is hard to see how this could be done legally.

Meanwhile, typically, the riskier countries are subject to wide to-and-fro swings of sentiment. Ten-year Canadian government bonds were yielding a peak 220 basis points over US Treasuries in June 1994, but only 130 basis points last May. Pre-referendum, they backed up to a spread of almost 200 basis points, before yesterday's sharp recovery.

As for Italy, the pensions-slashing technocratic government so beloved of overseas bond investors was forced last week to promise it would give way by the year-end to mainstream politicians (those who are out of jail, at any rate). The Italian bond yield spread over German bunds reached 650 basis points last April but the Dini magic had slimmed this to 470 basis points by September. Now the spread is nearly 200 basis points again.

And this is no time for a British journalist to sneer at the plight of the Canadian dollar. For all their current and potential troubles, Canadian government 10-year bonds yield 40 basis points less than UK gilt-edged. We can blame the approach of a pre-election Budget, but not yet those Scottish devolutionists.

INTERNATIONAL COMPANIES AND FINANCE

Pension and tax charges depress KLM's second quarter

By Ronald van de Krol in Amsterdam

KLM Royal Dutch Airlines said the recent resumption of tax charges and pension premiums caused net profits to fall by nearly 15 per cent in the second quarter of 1995-96.

But the Dutch carrier stood by forecasts that full-year results would show a slight improvement. It argued that taxes and pension premiums, plus unfavourable currency movements, would exert less negative influence in the second half of the financial year ending March 30 than they did in the first.

Net profits fell from Fl 354m to Fl 302m ($191.78m) in the three months to September 30, in spite of an 11 per cent increase in traffic. Pre-tax profits were up 10 per cent at Fl 398m, but operating results declined by 12.6 per cent to Fl 338m.

If KLM had been liable for tax and pension charges a year ago, net profits would have risen from Fl 211m to Fl 302m, Mr Rob Abrahamsen, financial director, said.

On the positive side, KLM's results were boosted by a revaluation of its preferred shares in Northwest Airlines, its US partner. This helped lift the "result from holdings" from Fl 24m a year earlier to Fl 83m in the latest quarter.

Mr Abrahamsen acknowledged that overall results were lower, but added "the quality of the profits has improved," citing the payments of normal business expenses such as taxes and pensions.

KLM also reported progress in lowering its break-even load factor – the rate at which operating revenues are balanced by operating expenses. Because of an 8 per cent decline in unit costs KLM managed to push down its break-even load factor by one point to 66.4 per cent.

However, in the second quarter, which covers the peak summer holiday period, this factor fell to 64.8 per cent from 67.3 per cent a year earlier, putting it just below KLM's long-term target of 65 per cent.

Seasonal effects are expected to cause the break-even load factor to rise above this level in the third and fourth quarters, Mr Abrahamsen said. The latest results took first-half net profits to Fl 437m, a decline from the previous year's Fl 476m.

The effect of the strong guilder was evident in KLM's yields in the first half. In local currencies, yields rose for both passenger and cargo traffic. But when translated into guilders, the yields fell by 7 per cent.

Until December 1994, KLM had enjoyed a long "holiday" from pension premiums, but in the second quarter it had to pay Fl 65m. Taxes, which totalled Fl 95m in the latest quarter, had also been nil a year ago because of losses carried forward. These have now been depleted.

Japanese airlines' results, Page 21

The German telecommunications operator is working to forge an international presence, writes **Michael Lindemann**

Deutsche Telekom raises its sights

EQUITY OFFERING

Five months into one of the most gruelling jobs in German industry, Mr Ron Sommer has lost none of the self-assurance developed during his 14 years at Sony, the Japanese consumer electronics group.

His time at Sony, says the new chairman of Deutsche Telekom, helped him create an ambitious vision for the future of the German telecoms group. That vision includes turning Telekom into a household name.

Getting there will require Mr Sommer to deploy the very best of his talents. Until the beginning of this year Deutsche Telekom was part of the federal civil service and best-known for its slow service and high prices.

But since taking over in May, Mr Sommer has scored an important success. The European Commission last week gave the go-ahead for Atlas, the strategic alliance with France Télécom. Atlas represents the cornerstone of Deutsche Telekom's international activities.

That side of the business has long been neglected, a problem underscored by the fact that Mr Sommer still does not have a full management board member to look after international business.

With Atlas approved, though, there are signs the US authorities may approve Phoenix, an alliance with the US carrier Sprint which will turn Deutsche Telekom into a global carrier.

If Mr Sommer can get the deal signed this year, he will have surprised many industry observers who predicted it would take much longer.

Linking up with Sprint means Deutsche Telekom could start offering business clients services around the globe, a market dominated by AT&T and British Telecommunications, the US and UK operators.

While making aggressive moves internationally, Mr Sommer will have to watch his own back yard, where he faces growing competition from a handful of Germany's largest companies eager to get into telecoms.

He also needs to galvanise a company where about 50 per cent of the 210,000-strong workforce are still civil servants with jobs for life.

Obligations like that will ensure that Deutsche Telekom's costs remain considerably higher than those of its private sector competitors once the German telecoms market is liberalised in 1998.

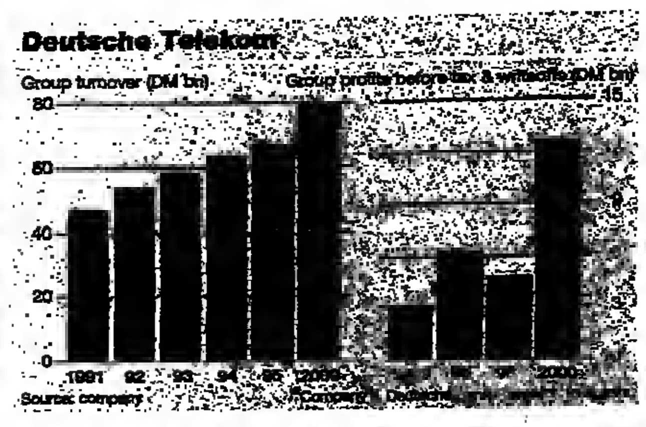
Finally, Mr Sommer will need to steer the company through a two-stage stock exchange listing expected to be worth about DM30bn ($21.34bn) – one of the world's biggest initial public offerings.

Analysts in London, one of several bourses where Deutsche Telekom plans to list next year, are bemused that such a large offering, which begins in the middle of next year, has so far gone almost unnoticed, but Mr Sommer remains confident.

"You couldn't have a better team than the one we have," he says, referring to the consortium placing the shares which is led by Deutsche Bank, Dresdner Bank and Goldman Sachs, the US investment bank. "The analysts in London know that too."

Mr Sommer is also confident he can allay fears about the company's DM125bn debts, run up after heavy investment in eastern Germany and abroad. The debts are so big that industry watchers even speculate Mr Theo Waigel, the finance minister, will have to write-off part of them to make Deutsche Telekom's balance sheet more attractive.

Ron Sommer: confident of allaying fears over debt



Mr Sommer dismisses such ideas. "That would be a very nice present but [Mr Waigel] won't do that," he says. "These debts do not give me sleepless nights. The equity ratio will be improved and the prospects will get systematically better in the next years."

In the meantime everything possible is being done to change the attitude of the company's employees, probably the most difficult task. People are being taught to do things more quickly, to be more flexible and aggressive.

"It's not as if the Bundespost, when it was still a government agency, was asleep. Things just took longer," Mr Sommer says. "We are simply speeding it all up. We're telling people: 'Don't always wait until you've discussed it with the management board. Do it. And if it turns out to be a flop then we'll pull out of it.'"

Certainly Mr Sommer's international background – he was born in Israel of a Russian father and a Hungarian mother, grew up in Vienna and has spent years in France and the US – is a tonic for Deutsche Telekom's employees. Until very recently they operated almost entirely on a domestic basis. Mr Sommer is now trying to persuade them, as he puts it, "to operate globally and have fun globally".

Prague market ruffled by breath of fresh air

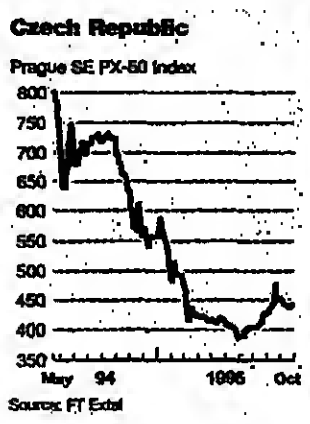
Vincent Boland on the deal between a US corporate raider and a Czech entrepreneur

A carefully stage-managed raid on the Czech Republic by a US investor last week has delighted analysts, bemused many of the country's big investors, and caused not a little consternation in the boardrooms of some of the country's leading companies.

It is clear that Stratton Investments has netted a potentially lucrative portfolio of some of the country's leading corporate names. What is not clear is what the investment company intends to do with them.

Stratton bought large stakes in up to eight Czech companies in a $140m deal with Harvard, an investment management group run by Mr Viktor Kozeny, the Czech privatisation entrepreneur.

Viktor Kozeny: maverick in a conservative business



Michael Dingman: took stakes in eight top Czech companies

The two investment companies now control Sepap, a paper company; Sklo Union, a holding company in the glass industry; and Czech Ocean Shipping, a transportation group. They also have significant minority stakes in chemical group Spolana; brewery Plzensky Prazdroj; pulp producer Biocel Paskov; and Prazska Teplarenska, the heating utility for the Prague area.

Stratton and Harvard have said they will vote their shareholdings collectively. Harvard has also secured a 10 per cent interest in any capital gains Stratton, owned by Mr Michael Dingman, makes on its investment. The pair say they want to work together to help these companies restructure, build up new markets and look for synergies. These tasks have been entrusted to the Czech investment funds since vouchers-for-shares privatisation ended but most of them, including Harvard, lack the resources to do so.

What Harvard has that other funds do not is the brash and controversial Mr Kozeny. The Czech-born, US-educated entrepreneur, aged 33, is a maverick in a business peopled by conservatives. While some prefer ownership for its own sake, he is intent on making money. Selling to an investor such as Stratton was one of the few options he had.

Mr Kozeny drove Czech share prices up by about 10 per cent in the past few months while rebuilding Harvard's stakes, but few other investors knew his wider intentions. "It's like boys swapping baseball cards," observes Mr George Collins of the investment bank Patria Finance, who says the Prague market has been waiting for such a deal since the end of mass privatisation.

There is no obligation on shareholders in Czech companies to disclose their interests. This enabled the deal to be done silently over the past few months and could encourage other investors to adopt a similar strategy.

The impact of the deal was most acutely felt, not in Prague, but in Stockholm. AssiDomän, the Swedish paper group, owns 32 per cent of Sepap and had signalled its intention to acquire control through a proposed share issue, timed for next month.

That now looks unlikely, but AssiDomän insists that, despite Stratton's move, its strategy is unchanged. The two shareholders are to meet soon. Mr Daniel Arbess, head of Stratton's European operations, says it will "bring to the table a highly qualified expert in the pulp and paper industry".

AssiDomän believes it fills that role. "We assume they know we are very good industrial partners," says Mr Johan Lagercrantz, group treasurer at the Swedish company. "We have a lot to add to [Sepap]."

In a note to investors last week Nomura Equity Research described the Stratton move as "less like an injection of management expertise into the Czech industrial sector than an attempt to make AssiDomän pay a fuller price for its intended acquisition of Sepap", whose executives have spent the past three years restructuring the company's operations in a shake-up that made it the darling of the stock market. Czech Ocean Shipping and Biocel have also made progress.

There is growing evidence that Czech companies with foreign strategic investors are restructuring much faster than those without it, but mostly in cases where the foreign investor has put in large amounts of cash. Skoda Auto, owned by Volkswagen, and Tabak, owned by Philip Morris, are the most prominent examples.

Elsewhere progress is slow in a country where the big banks dominate and, through their own large funds, dictate much of the pace. While Stratton is "a medium term investor, between current shareholders and potential strategic investors", it is likely to have the resources to achieve what it sets out to do, especially since it is now the main shareholder seven of the companies.

Mr Jiri Hrbacek, a manager with ZB Trust, a fund group, says a trend towards greater co-operation among shareholders in influencing companies they own is causing the pendulum of power to swing away from company executives. In the first stage of privatisation, he says, "executives were the kings in their companies. Those days are over."

DSM posts sharp rise in third term

By Ronald van de Krol

DSM, the Dutch chemicals group, reported a 105 per cent surge in third-quarter net profits, prompting the company to predict that full-year results would also roughly double compared with 1994.

Net profits rose from Fl 114m to Fl 234m ($148.59m), on turnover up 5 per cent at Fl 2.26bn.

Nine-month net profits showed an even sharper gain, rising from Fl 295m to Fl 927m as turnover increased from Fl 6.63bn to Fl 7.53bn.

But in spite of the strong figures, which were in line with expectations, DSM's shares fell from Fl 121.70 on Monday to close yesterday at Fl 118.20.

Analysts blamed this partly on the company's statement that plastics prices in particular were showing sharp decreases, and also on its forecast that a price recovery would emerge in the first six months of 1996.

The company, which earlier had said only that full-year earnings would be "very significantly higher", attributed the strong gains to an improvement in margins. This, in turn, was caused by a 16 per cent average increase in the prices commanded by DSM's products.

Although sales prices on average were sharply higher, turnover growth was much more modest because of a 4 per cent decline in volume, the continuing strength of the guilder, and various divestments made by the company during the year. Mr Simon de Bree, managing board chairman, described the result as a record for the third quarter.

But he also said that price decreases for a number of plastics "were larger than one might expect given the good basic supply and demand situation". DSM said the price declines in plastics were caused by traditional weakening of demand in the summer months and a run-down of inventories by customers.

Ms Kirsten van Putten, chemicals analyst at Mees Pierson in Amsterdam, said that the company's forecasts marked a change to earlier predictions that plastics prices would recover in late 1995.

She calculated that the company's prediction of doubled profits in 1995 implied a drop in fourth-quarter net results before extraordinaries from Fl 231m to Fl 130m.

"From the current fourth quarter, the company's figures on a year-to-year comparison basis will show a decline," she said.

DnB climbs 7% despite pressure on margins

By Christopher Brown-Humes in Stockholm

Den norske Bank, Norway's biggest bank, achieved a 7 per cent rise in nine-month pre-tax profits from NKr1.97bn to NKr2.10bn ($338m), despite intense competition and pressure on margins.

It also made a substantial provision against its exposure to Eurotunnel, the troubled operator of the cross-channel rail link between the UK and France, in the latest quarter. It is the first bank outside France to have publicly announced such a move.

DnB, which is 72 per cent state-owned, attributed its improved performance to higher profits from bond and currency trading and write-backs of earlier provisions for loan losses. These enabled it to compensate for a drop in net interest income from NKr3.54bn to NKr3.24bn and a rise in operating expenses from NKr3.40bn to NKr3.61bn.

Mr Finn Hvistendahl, managing director, said the bank had expanded its lending despite competitive pressures.

Operating profits before loan losses slipped from NKr1.80bn to NKr1.77bn. But the pre-tax figure reflected a NKr374m write-back of loan losses, NKr227m more than a year ago, due to the strength of the Norwegian economy.

The third-quarter featured net loan losses of NKr134m, including the Eurotunnel provision. The bank said the provision was not as big as its exposure to Eurotunnel, but declined to provide details. Its move follows Eurotunnel's decision to suspend interest payments on its £8bn ($12.6bn) debt.

Despite the third-quarter loan loss, DnB said problem loans had fallen and were NKr1.4bn lower than at the start of the year at NKr6.5bn.

Mediobanca faces forced offer for Ferfin

Italy's stock market regulator Consob said yesterday that the stake held by Mediobanca in Ferruzzi Finanziaria might be enough to warrant a public buy offer, Reuter reports from Milan. Mediobanca had said at a shareholders meeting on Saturday that it had bought 10.7 per cent of Ferruzzi on the market last week, taking its stake to about 11 per cent.

Consob said Mediobanca's stake, at 11.2 per cent, "takes on a relevance under the application of [the public buy offer law] for shares bought during the last twelve months". It must therefore launch a public buy offer on Ferruzzi in the next 30 days.

The offer generally has to be made for a comparable number of shares to those already held, at the average price paid. Mediobanca said it paid an average L1,580 per share for its stake.

Ferruzzi shares closed up 8.7 per cent yesterday at L1,199.

هكذا من الاصل

هكذا من الأصل

AMERICAS NEWS DIGEST

Reduced costs help Tenneco advance

A strong performance from its packaging division and lower operating costs helped lift US industrial conglomerate Tenneco's third-quarter earnings. During the quarter Tenneco also realised a gain of 65 cents a share from the sale of stock in Case Corporation, and registered a charge of 25 cents per share.

Including special items, Tenneco said it earned $214m, or $1.23 a share, from continuing operations in the quarter, compared with $151m, or 81 cents, in the same quarter last year. Revenues dipped to $2.1bn in the period, from $3.0bn last year, as sales from Case Corporation diminished with Tenneco's disposal of the shares.

During the quarter Tenneco sold 16.1m Case shares for a total of $564m and reduced ownership to 21 per cent. Much of that capital was earmarked for the $1.27bn acquisition of Mobil Plastics. That acquisition is expected to close within the next two quarters.

Tenneco's Packaging Corporation of America, which manufactures paper and plastic packaging, saw operating income rise to $111m, up 76 per cent from the first quarter of 1994, and revenues rose to $665m from $562m.

Tenneco's natural gas business declined, with operating income in the quarter falling to $81m, from $97m last year. The group's automotive parts division also reported lower operating income, in part because of a one-time $10m charge related to a new exhaust system process. Tenneco Automotive's income in the quarter was $61m, compared with $70m last year.

For the nine months ended September 30, including special items, Tenneco reported net income of $544m, or $3.11 a share, on sales of $6.5bn. That compares with $367m, or $2.04, on sales of $9.3bn last year. *Laurie Morse, Chicago*

Cristalerias de Chile slips

Cristalerias de Chile, a holding company with glass and plastics packaging and media and communications business, has announced net earnings for the first nine months of the year of 7.68bn pesos ($18.5m), down 0.3 per cent from a year earlier.

Local analysts say the difference is due in large part to accounting losses in the third quarter on the associated cable TV business, and to the impact of the depreciation of the peso during the quarter on the company's dollar debt service charges. Operating income was 6.78bn pesos in the quarter, up 15 per cent from the same 1994 period.

CIECSA, the media company within the Cristalerias holding, announced last week it was forming a new joint venture in cable TV between its own Cordillera Comunicaciones and Intercom, majority-owned by CTC, the domestic telephone carrier. *Imogen Mark, Santiago*

Entel ahead after nine months

Entel, Chile's main long-distance telecom company, announced profits of 6.45bn pesos ($15.5m) for the first nine months, a 76.2 per cent fall on the same period of 1994. Operating results were 63.7 per cent down, to 11.26bn pesos, compared with 34.45bn for the first nine months of last year. Sales were 67.37bn pesos against 82.39bn.

The figures record the impact of the highly-competitive long-distance multicarrier system introduced last year, when six oew companies entered the market. But the most recent figures show that in August this year Entel was holding its lead as the main long-distance carrier. *Imogen Mark*

News Corp, TCI set to form sports TV venture

By Christopher Parkes in Los Angeles

ESPN, the international sports television network, may soon face its most telling challenge from a combination of the resources of Mr Rupert Murdoch's News Corporation and Mr John Malone's Tele-Communications Inc.

A joint venture between Fox Broadcasting, the News Corp subsidiary, and TCI's Liberty Media, is expected to be announced to the next few days.

It will pit the forces of Walt Disney, which is in the process of absorbing ESPN's parent, Capital Cities/ABC, against two of the most aggressive personalities in the television industry.

The deal will also sharpen the battle for the attention of the adult male audience, which is widely seen as the "missing" link in most television audience profiles.

ESPN has an estimated 65m viewer/subscribers to the US alone, which is equivalent to about 70 per cent of the domestic market. It also supplies sports programming to some 150 foreign markets.

Liberty is the programming arm of the largest cable TV concern in the US, and holds stakes in more than a dozen regional and local sports networks, while Fox has strong international connections through operations such as Sky Television in the UK and elsewhere.

The News Corp subsidiary has also been active recently buying up rights to international sporting events and series. Much of the concern's attention has been focused on the US since 1993, when it purchased the rights to broadcast National Football League games.

Mr Murdoch's aggressive reputation is well-established, while Mr Malone was prominent as the prime mover in the recent deal that enabled the Time Warner conglomerate to take over Turner Broadcasting System.

Viacom held back by Paramount downturn

By Tony Jackson in New York

Viacom, the US media group, reported strong growth in revenues and cash flow at its Blockbuster and MTV subsidiaries, largely offset by lower results from the Paramount film studio.

While earnings were sharply lower at 21 cents a share against $1.32, cash flow was up 2 per cent on a like-for-like basis at $711m. Viacom's shares were up 5 per cent at $49½ by lunchtime.

The MTV television network raised revenues by 26 per cent to $374m and cash flow by 20 per cent to $117m. This was due to higher advertising revenues and payments from affiliated stations, partly offset by higher operating costs.

Total revenues from networks and broadcasting were up 15 per cent to $551m and cash flow by 23 per cent to $185m.

The video, music and theme parks division – consisting chiefly of the Blockbuster video chain – raised revenues by 15 per cent to $939m and cash flow by 20 per cent to $229m. This was attributed to an increase in the number of Blockbuster outlets both in the US and abroad, with 410 new outlets over 12 months. The theme parks raised cash flow by 10 per cent.

For the first nine months, Viacom incurred a loss of $30m on its 49.9 per cent stake in Discovery Zone, a chain of children's entertainment centres. Part-owned through Blockbuster but publicly quoted, the chain has lost heavily this year through over-ambitious expansion.

The entertainment division suffered a 51 per cent fall in cash flow to $72m, on revenues 9 per cent lower at $737m. Viacom said tha downturn had been expected, and resulted from the very strong box-office performance last year of *Forrest Gump*, the most successful film in Paramount's history.

The publishing division, consisting of Simon & Schuster, raised revenues by 5 per cent to $735m and cash flow by 3 per cent to $211m. This reflected an improvement in educational sales, partly offset by lower profits from consumer publishing.

Mr Sumner Redstone, chairman, said the company was "firmly on track to meet its ambitious financial and operating goals for 1995".

Sumner Redstone: group 'on track' to meet goals for 1995

Gearing up for a more productive future

Alfa aims to reduce its vulnerability to Mexico's volatile economy, writes **Daniel Dombey**

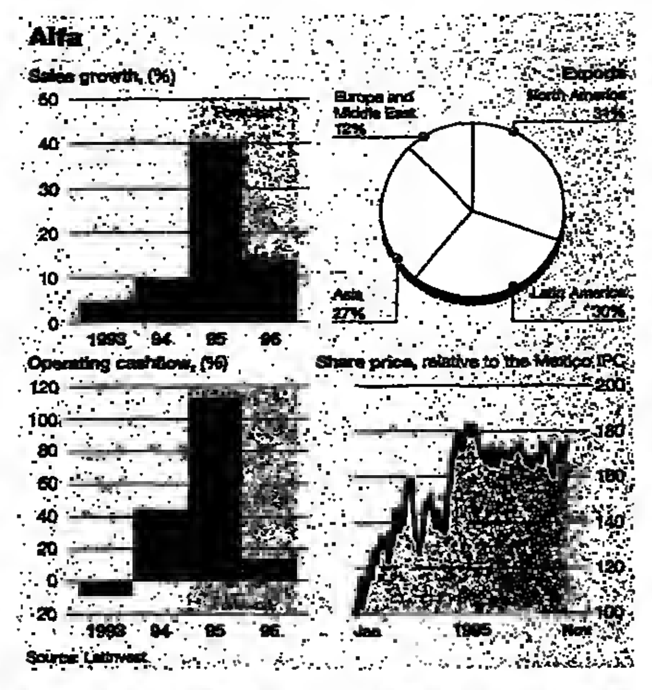
Alfa, ona of Mexico's leading conglomerates, has a two-fold strategy to lessen its exposure to fluctuations in commodity prices and exchange rates. Recent investment means it can offer more specialised services in ateel and petrochemicals, and it plans a diversification into Mexico's potentially huge telecommunications market.

Mr Peter Hutchison, chief financial officer at the group which has interests in steel, petrochemicals and food, says that "having a greater portion of the portfolio in domestic-oriented companies acts as a hedge against a strong peso".

The company recently announced third-quarter sales of nearly 5bn pesos ($726m), compared with 3.4bn pesos in the previous third quarter, and operating profits of 769m pesos, more than two-and-a-half times the figure for the same period last year.

For the first nine months of the year, exports were 39 per cent of total sales. Alfa hopes to have total revenues of more than $1bn from exports in 1995, compared with about $600m in 1994.

The company's new $400m flat steel mini-mill near its headquarters in Monterrey has increased capacity when steel prices are near the top of their cycle. Its petrochemical division is also benefiting from high prices and has increased capacity, while the separately listed food division, Sigma, which caters for the domestic market, is also growing.



Results released last week showed Sigma's revenues at 1.6bn pesos for the first nine months of the year, against 1.5bn pesos, and profits of 75.7m pesos, up by more than 50 per cent on the same period in 1994.

Last month, Alfa was among the first wave of Mexican companies returning to capital markets, when it floated $130m of convertible bonds.

"Alfa was rather fortunate," says Mr Jorge Octavio Garza, an analyst at Vector, a Mexican stockbroker. "The devaluation came when it had practically finished its investment and restructuring projects, which bore a heavy dollar cost."

A total of 5.7bn pesos was invested in property, plants and equipment in the five years to the end of 1994, nearly doubling capacity. Between 1991 and 1994 the group reduced its workforce hy 5,000 to 23,000.

Hylsamex, Alfa's steel division, hopes that the capabilities of the new steel plant will allow it to fill a specialist niche. Greater precision in control and measurements should allow the plant to produce thinner metal at lower cost than competitors. It also hopes to produce more products to customers' exact specifications.

Hylsamex's own nine-month figures show revenues of 4.59bn pesos, compared with 3.67bn pesos, and a profit of 425m pesos against a loss of 49m pesos for the same period a year before.

The company's petrochemical division, Alpek, which is also Mexico's largest private petrochemical concern, has increased its production of the raw materials for polyester, and may gain further capacity if it wins control of two of tha large petrochemical complexes that state oil concern Pemex is planning to sell. The purchase would improve Alpek's access to its primary materials.

Alfa's biggest project, however, is in telecommunications. A year ago Alfa announced a joint venture with AT&T of the US to compete with telephone monopoly Teléfonos de Mèxico (Telmex) in the country's long-distance market.

Though the communications ministry has still to publish the regulations that will govern the market, Alfa promises to release its business plan soon.

Mr Hutchison, who is heading tha telecommunications project, says that the goal is to take second place to Telmex in the long-distance market in the medium term.

The likely purchase of petrochemical plants and the telecommunications venture will be financed by mixtures of debt and equity, raised through Alfa's separate divisions rather than the general holding company. Hylsamex, and Sigma, the processed foods division, both hecame listed companies in 1994.

The group's debt to capital ratio is 47.6 per cent for the third quarter, and it hopes to generate $600m in operating cash flow by the end of the year. Current investment plans will take aeveral years to complete.

But in the short term, if the prices of Alfa's internationally traded products do turn markedly downward, the company's main hope for sustained impressive results is a strong recovery in Mexico's stricken economy. At the moment, that seems elusive.

هكذا من الأصل

INTERNATIONAL COMPANIES AND FINANCE

ASIA-PACIFIC NEWS DIGEST

Cost-cutting helps Kubota at midterm

Kubota, Japan's leading farm equipment maker, benefited from firm domestic demand and cost-cutting in the half-year to September. It posted a 3.8 per cent rise in non-consolidated recurring profits to Y14.6bn ($144m), on a 1.6 per cent increase in sales to Y346.1bn. A 2.8 per cent rise in domestic sales to Y301.8bn offset a 5.8 per cent fall in exports to Y44.3bn. After-tax profits fell 11.8 per cent because of an increase in corporate tax payments.

Sales in Kubota's industrial machinery division advanced 2.3 per cent to Y181.1bn, while building equipment and materials increased 6 per cent to Y40.2bn. Sales in its pipe division, however, fell 3.2 per cent to Y87.3bn. For the full year to March, the company expects a 3.2 per cent rise in sales to Y800bn and a 2.1 per cent increase in recurring profits to Y34bn.

Komatsu, the construction machinery maker, suffered a 17.1 per cent fall in current profits to Y6.1bn because of sluggish domestic demand. Sales slipped 0.3 per cent to Y234.8bn. Domestic sales fell 3.8 per cent to Y155bn, while exports rose 7.3 per cent to Y79.8bn. Construction equipment sales rose 0.8 per cent to Y194.4bn, but industrial machinery sales fell 26.6 per cent to Y9.9bn.

After-tax profits rose 1.2 per cent to Y4.3bn. The company expects stronger demand in the second half and forecasts a 7.9 per cent rise in *annual* recurring profit to Y18bn on a 0.1 per cent rise in sales to Y500bn. *Emiko Terazono, Tokyo*

Semiconductor side boosts Oki

Oki Electric Industry, the Japanese communications equipment group, attributed a 16 per cent rise year-on-year in its parent current profit in the first half to robust semiconductor sales and cost-cutting. Oki reported Y28.63bn ($282m) in parent current profit in the April-September half year, against Y24.67bn a year ago. "Semiconductors, especially memory chips, sold well and helped improve our current profit," it said.

Six-month sales fell from Y273.09bn a year earlier to Y257.41bn because the company separated its printer and facsimile division into an independent unit last October. Of Oki's sales of Y273.09bn in the same half-year period of 1994-95, those from the printer and facsimile division totalled Y33bn. Parent net profit fell from Y22.11bn to Y15.6bn because of increased tax payments.

The dollar's recovery against the yen and the government's economic package announced earlier this year were likely to have a positive impact on second-half earnings, although the company said it was not very optimistic about the outlook. *Reuter, Tokyo*

Cosmo Oil plunges at halfway

Cosmo Oil, the Japanese oil refiner, saw its unconsolidated pre-tax, or recurring, profit plunge 45 per cent to Y7.17bn ($20.6m) in the first half to end-September. Sales fell from Y678.81bn to Y654.65bn.

Cosmo Oil blamed the decline in profit on the worsening retail market for petroleum products, especially petrol, in anticipation of deregulation in April 1996. *Reuter, Tokyo*

Pacific Dunlop details float

Pacific Dunlop, the Australian conglomerate, plans to raise A$125m (US$95.2m) through the flotation of its Cochlear subsidiary. The offshoot makes and supplies hearing systems which can be surgically implanted. Cochlear said 50m shares – Pacific Dunlop's entire holding – were being offered to investors. The public offer will be priced at A$2.50 a share, but institutional investors will be asked to bid in a A$2.20-A$2.50 a share range.

Pacific Dunlop shareholders will have first call on up to 17.5m shares, and 23.75m shares have been set aside for the institutional offer. The company also plans to list ADRs in the US. San Francisco-based Montgomery Securities will act as the US and international co-manager, in addition to the two Australian lead managers. The offer is not underwritten. Cochlear also said it had agreed a five-year collaboration agreement with Germany's Siemens, one of the largest international suppliers of hearing aids. Cochlear said the companies would collaborate in marketing, sales, distribution and research and development.

Cochlear is forecasting revenues of A$63.3m in the year to end-June 1996, up from A$58.7m last year, and after-tax profits of A$10.4m. *Nikki Tait, Sydney*

John Fairfax confirms forecast

John Fairfax, the Australian newspaper publisher which has three media magnates on its share register, confirmed yesterday it expected to see "satisfactory" growth in the 1995-96 financial year, despite higher newsprint prices and weaker advertising trends. In its annual report, the company said it expected the residential property market to remain weak, and employment and motor vehicle advertising to be subdued in the first half of the year. However it held out the prospect of some improvement in the third and fourth quarter.

The company said it planned to offer Mr Bob Mansfield, the successor to outgoing chief executive Mr Stephen Mulholland, options over 3.5m shares, exercised at A$2.82 in four tranches at annual intervals. *Nikki Tait*

Genting shares suspended

Shares in Genting, the gaming-based conglomerate that is one of Malaysia's biggest listed concerns, have been suspended following the discovery of a large amount of forged company share certificates. Kuala Lumpur stock exchange authorities have asked Genting to recall all share certificates for examination. The company has informed the exchange that it has so far uncovered 166,000 forgeries.

Brokers say many more bogus Genting share certificates could be in circulation. Several syndicates who forge shares and sell them on to stock dealers are known to be operating in Malaysia.

The Kuala Lumpur stock market, the biggest in south-east Asia, is converting to scripless trading. The government has insisted that the central depository or paperless trading system must be fully operational by the end of next year. As share certificates are converted to the new system more forgeries are being discovered. Brokers say several million bogus shares of some of the country's biggest companies are likely to be in circulation. *Kieran Cooke, Kuala Lumpur*

Mitsubishi Materials suffers 50% decline

By Michiyo Nakamoto

Mitsubishi Materials, the Japanese metal and ceramics maker, suffered a 50 per cent decline in first-half net profits, hit by a fall in domestic cement prices and lower demand for aluminium cans.

The results were also adversely affected by the closure of two affiliated companies set up five years ago. The affiliates were formed to grow and market flowers in an attempt to provide work for coal miners who lost their jobs when Mitsubishi Materials closed its coal mines in Hokkaido, Japan's northern island. However, poor business forced the closure of the units.

As a result, net profits fell from Y1.1bn to Y568m ($5.6m).

The company, part of the Mitsubishi group, nevertheless posted recurring profits of Y2.69bn, up 5.6 per cent from Y2.55bn a year earlier. Sales were 1.7 per cent higher at Y349.7bn.

The increase in recurring profits was supported by cost-cutting measures and lower non-operating expenses. Operating profits remained under pressure, declining 7 per cent from Y8.3bn a year earlier to Y7.7bn.

Tough competition in the Japanese cement market put pressure on prices, while poor weather in the first few months of the reporting period led to slow demand for aluminium cans.

There was strong demand for the company's high-technology products, particularly silicon products.

Mitsubishi Materials has also been aggressively cutting costs. However, these factors failed to offset the weak performance in other areas, while the yen's strength against leading currencies also hurt results.

Mitsubishi expects the weak price trend across its product range to continue in the near future. It is forecasting recurring profits of Y6bn, against Y4.3bn previously, on sales of Y720bn, compared with Y691.8bn.

Asahi Glass sales hurt by fall in exports

By Emiko Terazono in Tokyo

Asahi Glass, the leading Japanese glass manufacturer which yesterday reported unconsolidated half-year results, said sales of architectural and fabricated glass had been hit by falling exports to the commercial building and vehicle sectors.

The figures were the first since the company changed its reporting year from January-December to April-March. It said recurring profits for the half-year to September were Y14.3bn ($140.7m). Sales totalled Y454.3bn and after-tax profits came to Y8.2bn.

Sales of Asahi's mainstay glass operations were Y219.2bn, or 48.3 per cent of the total. Sales of glass for construction use and for cars were weak, while glass bulb sales remained firm, supported by strong domestic and international demand.

Sales at Asahi's chemical operations were Y170bn, representing 37.4 per cent of total sales. Ceramics and refractories generated sales of Y12.8bn. Electronic product sales were Y40.4bn, while sales of other products, including optical lenses and frames and health equipment, amounted to Y11.9bn.

For the full year to next March, Asahi expects unconsolidated sales of Y910bn, recurring profits of Y31bn and after-tax profits of Y20bn. It expects to pay an annual dividend of Y9 a share.

Stiff competition restrains Japan's airlines

By Gerard Baker in Tokyo

April-September interim results (Y m)

	Operating revenue	Operating profit	Pre-tax profit	After-tax profit
Japan Airlines	561,379 (+6.7%)	25,051 (+38.7%)	12,946 (-37.1%)	9,232 (-21%)
All Nippon Airways	428,768 (+6.8%)	23,017 (+41.9%)	12,899 (+1,076.7%)	6,601 (286%)

Source: Companies

Strong demand for ovarseas tourism as a result of the soaring yen led to substantial sales growth at Japan's leading airlines in the six months to the end of September.

However, stiff competition in an otherwise weak domestic economy limited improvements in profitability, the companies said yesterday.

Japan Airlines and All Nippon Airways said the strong yen had helped lift international passenger revenues in tha six months, and had led to strong gains in operating profits. Increased capacity and lower fares had, however, prompted a fall in net passenger yields

ANA also reported a sharp increase in pre- and after-tax profits, while JAL recorded declines at both levels. JAL said it had received fewer credits from aircraft parts manufacturers in the period as its components orders bad declined.

JAL reported a 10.7 per cent increase in international passenger numbers and a 7.4 per cent rise in revenues as discounting intensified. European and south-east Asian traffic showed particularly strong increases. However, most of the gains were among economy class passengers and business class demand remained "static".

Domestic passenger numbers were 12.3 per cent higher, with revenues up 6.6 per cent. International cargo rose 7.7 per cent and domestic by 6.9 per cent.

JAL said the company bed benefited from particularly impressive increases in imports from Europe. Despite higher costs associated with the opening of Kansai international airport, overall operating costs rose just 5.5 per cent.

The airline said future trends remained unclear, even though prospects for the Japanese economy were improving. Steady increases in demand would be partly offset by stronger competition and more price cuts. JAL lifted its sales forecast for tbe full year to Y1,092bn ($10.7bn), from a June forecast of Y1,085bn, but left its estimate of pre-tax profit for the year unchanged at Y3bn.

ANA said international routes had recorded a 28.1 per cent increase in the number of passengers carried as a result of a 26.9 per cent increase in capacity. However, fiercer competition on international routes had resulted in a smaller increase in revenues, by 19 per cent, and a corresponding fall in net yields.

In domestic operations, ANA reported a 5.9 per cent increase in the number of passengers, but, as with international routes, tbe company said tougher competition had produced a fall in net yields, with revenues rising by 3.1 per cent.

The volume of international cargo carried increased 44.3 per cent from the same period last year. Domestic cargo volume rose 5.8 per cent.

Overall operating costs rose 5 per cent in spite of a 5.9 per cent increase in domestic capacity and a 26.9 per cent rise in international capacity.

ANA expects operating revenue of Y837bn for the year to tbe end of March, slightly below its earlier forecast, as a result of weaker-than-expected domestic demand. Pre-tax profit is expected to reach Y13bn, unchanged from its previous forecast.

● JAL is to order five Boeing 777-300 aircraft for a total of abont Y80bn, including the cost of the engines, Reuter reports from Tokyo.

The 777-300, a stretched version of the new 777 twin-engined aircraft, is expected to be delivered to JAL in 1998, the airline said. JAL bas not decided from which company it will order engines for tbe aircraft.

Inventory concerns prompt slide in Sony shares

By Michiyo Nakamoto in Tokyo

Sony, the Japanese consumer electronics and entertainment group, has suffered a sharp fall in its share price because of concerns over rising overseas inventories.

The company's shares dropped 11.5 per cent in the last six trading days, and yesterday closed 3 per cent down at Y4,600.

Investors are concerned that Sony's inventories of audio-visual products are rising, particularly in the US and Europe where consumer electronic markets have been weak this year.

The concerns were triggered by an analyst's report that Sony could report a net loss wben it announces second-quarter results next week, because of high inventory levels.

The industry's inventories of televisions and video recorders in the US currently stand at about 1.2 to 1.3 months, or double the level of 0.7 months around this time last year, said Mr Hiroyuki Iba, industry analyst at Nikko Research Centre.

Sony said inventories were at high levels in the first quarter. Expressed in terms of sales, the company's worldwide inventories of consumer electronics products were at 2.56 months at the end of June, compared with 2.41 a year earlier.

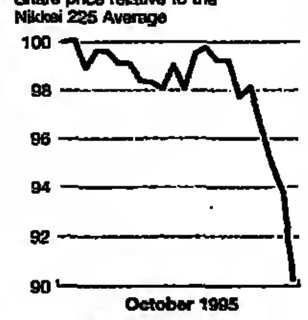
But it added that sales of consumer electronics products in the US had been firm, showing a 15 per cent increase in local currency terms in the first quarter of this year. European markets, however, bad been slower, particularly in eastern Europe.

The problem was not confined to Sony, Mr Iba said. Japanese consumer electronics makers, which have shifted a significant proportion of their audio-visual production to south-east Asia, had exported large volumes of consumer electronics products to the US on expectations of buoyant sales following a strong year in 1994. When demand failed to meet expectations, the new factories were unable to adapt to the situation, Mr Iba said.

Although most Japanese consumer electronics companies are suffering from lacklustre markets for tbeir traditional products, Sony is particularly vulnerable to a downturn in sales of video recorders, TVs and audio products, whicb comprise almost 60 per cent of group sales.

Sony

Share price relative to the Nikkei 225 Average



Source: FT Extel

Sony was also affected by speculation that it would sell a stake in its US operations to reduce its debt burden. Sony bad net debt of Y1,450bn ($14.3bn) at the end of June.

The company said it did not have any cash flow problems. It is forecasting net income of Y41bn for the current year and plans to spend Y270bn on capital investment, with a further Y230bn earmarked for depreciation and amortisation.

However, it said that because of its high debt it "would consider various options, including an initial public offering" if there were a good opportunity.

In tbe previous financial year, Sony wrote off Y265bn in goodwill associated with its Hollywood film business, the former Columbia Pictures which it acquired in 1989. Partly as a result of this, it reported a pre-tax loss of Y220.9bn.

Seeking buyers for £170m European portfolio, equivalent to 5% of gross assets

MEPC looks to US in strategy shift

By Simon London, Property Correspondent

MEPC, the second largest UK property company, yesterday signalled a shift in strategy by announcing the proposed acquisition of £198m ($313m) of US properties and its intention to withdraw from continental Europe. The company is making an agreed offer of up to £191m, a small discount to net asset value, for the North American Property Unit Trust, a pooled investment vehicle owned by about 30 UK investment institutions.

It also plans to sell its £170m portfolio of continental European assets, equivalent to about 5 per cent of its gross assets, although buyers have yet to be found.

Mr James Tuckey, chief executive, said proceeds of any sales were likely to be reinvested in the US and Australia. He described the moves as "a very significant shift in strategy".

Until yesterday, MEPC's stated aim was to increase its continental European portfolio to up to 20 per cent of its total assets. "There are better opportunities for us to invest in the US than in France or Germany. Looking at the high labour costs and regulated markets in those countries it is very easy to be bearish," Mr Tuckey said.

MEPC has received irrevocable undertakings to accept its offer from unit holders representing 54 per cent of the voting rights of the North American Property Unit Trust. It the deal goes through, unit holders will receive about 14m MEPC shares and np to £32m in cash.

Mr Tuckey said the deal would enhance earnings per share next year and have a neutral impact on net assets per share.

Mr Tuckey said the trading performance of its existing shopping centres had been very strong this year with "double digit" sales growth at some centres.

The company's shares increased by 13p to 376p following the announcement. Analysts said the deal would help restore a sense of direction at MEPC, which has underperformed the property sector in the aftermath of a disastrous office development programme in the late 1980s and early 1990s.

Lex, Page 24

RESULTS

		Turnover (£m)		Pre-tax profit (£m)		EPS (p)		Dividends: Current payment (p)	Date of payment	Corresponding dividend	Total for year	Total last year
AG Holdings	Yr to July 31	27.2	(17.9)	3.03	(2.76)	10.8	(10.6)	3.5	Jan 5	3.25	5.75	5.5
Belcanto $ Φ	6 mths to June 30	2.14	(-)	0.91♥	(-)	8.61	(-)	-	-	-	-	-
Bertam	6 mths to June 30	1.36	(0.775)	1.05	(1.25♥)	3.12	(5.13)	nil	-	1	-	5
Caspian §	6 mths to June 30	0.768	(1.82)	0.541L♠	(0.047)	0.6L	(0.06)	-	-	-	-	-
Cavendish Wates Φ	6 mths to June 30	0.14 ■	(-)	0.057	(-)	1	(-)	-	-	-	-	-
Davies (D.Y.) §	Yr to Apr 30	7.7	(5.5)	0.326L	(0.056L)	5.1L	(0.9L)	nil	-	nil	-	nil
Innovative Techs§	6 mths to June 30	0.043	(nil)	1.23L	(0.62L)	5.9L	(5.7L)	-	-	-	-	-
Kish Resources	3 mths to June 30	0.027	(0.015)	0.35L♠	(0.06L♥)	0.43L	(0.08L)	-	-	-	-	-
Le Creuset §	6 mths to June 30	22.7	(21.3)	0.117♠	(1.07)	0.4	(5)	-	-	-	-	0.45‡
London Fiduciary Φ	6 mths to June 30	0.795	(0.028)	0.057L	(0.025L)	0.007L	(0.072L)	-	-	-	-	-
Panther Securities	6 mths to June 30	1.94	(3.47)	0.702♠	(1.13♥)	2.3	(5.5)	1.3	Dec 4	1.1	-	2.7
Pilkington	6 mths to Sep 30	1,368	(1,303)	104	(77♥)	7.3	(5.1)	1.75	Feb 16	1.5	-	4.2
Premier Health	6 mths to June 30	3.06	(6.42)	1.1	(0.62)	15	(8.5)	nil	-	nil	-	nil
Rowe Evans	6 mths to June 30	3.98	(2.45)	2.82	(1.32)	3.55	(1.78)	-	-	-	-	3
SCS Satellite Φ	6 mths to June 30	0.001	(-)	0.59L	(-)	14.1L	(-)	-	-	-	-	nil
Silkborn	5 mths to June 30	0.076	(-)	0.015L	(-)	0.05L	(-)	-	-	-	-	-
Sims Food	6 mths to Sep 30	152.6	(133.7)	0.15	(1.21)	nil	(2.1)	1	Jan 5	2	-	4
Thames Water	6 mths to Sep 30	599	(572)	165.4♥	(150.9♥)	39.3	(36.8)	9.2	Feb 2	8.2	-	25.3
Ticketing Group §	6 mths to June 30	21.6	(27.3)	0.35L	(0.032)	0.04L	(0.004)	-	-	-	-	nil
Tullow Oil ♣	6 mths to June 30	2.3	(1.7)	0.84	(0.63)	0.47	(0.39)	nil	-	nil	-	nil
Investment Trusts		**NAV (p)**		**Attributable Earnings (£m)**		**EPS (p)**		**Current payment (p)**	**Date of payment**	**Corresponding dividend**	**Total for year**	**Total last year**
East German ✠	6 mths to Sep 30	1.91	(2.48)	1.4L	(3L)	0.025	(0.053)	-	-	-	-	nil
Fleming Japanese	Yr to Sep 30	248.3	(274.4)	0.564L	(0.042)	0.33L	(0.03)	nil	-	nil	nil	nil

Dividends shown net. Earnings shown basic. Figures in brackets are for corresponding period. †On increased capital. §USM stock. ΦAim stock. ♥After exceptional credit. ♠After exceptional charge. ♣Irish currency. $US currency. ✠German currency. ■Rent receivable. ‡French currency.

Pilkington rises to £104m as volumes show 2% gain

By David Wighton

Pilkington accompanied yesterday's rights issue with the announcement of a 70 per cent jump in first half profits to £104m ($165m), before exceptional items.

For the first time in five years, Pilkington saw an overall rise in prices of about 3 per cant. Volumes increased hy about 2 per cent to leave turnover 5 per cent higher at £1.37bn.

The dividend is increased by 17 per cent to 1.75p, out of earnings before exceptionals of 7.3p (5.1p).

Prices in Germany, which have recovered after a prolonged period of weakness, softened recently hut still showed a year-on-year gain of 8 per cent.

European building product prices also firmed and while antomotive glass prices continued to fall this was offset by higher sales of new, higher margin products.

Automotive glass profits fell to £28m (£39m) because of reorganisation and redundancy costs in the US and a slowdown in Argentina where Pilkington reports recent signs of recovery.

European profits more than doubled to £61m (£29m) thanks to strong growth from SIV in Italy, but the contribution from the rest of the world alipped to £28m (£33m) despite a good performance from Brazil.

Gearing was down to 59 per cent, compared with 66 per cent, and will fall to 54 per cent following the rights issue and acquisitions.

Stronger rubber price helps Rowe Evans double

The continuing strength of palm oil and rubber prices helped the profits of two plantation groups which yesterday reported results for the first half of 1995.

Rowe Evans Investments, which operates in Indonesia, announced more than doubled pre-tax profits of £2.82m ($4.45m), against £1.32m, on turnover up 63 per cent from £2.45m to £3.98m. Earnings per share were 3.55p (1.78p).

At Bertam Holdings, which has plantation and property interests in Malaysia, trading profits advanced to £353,000 (£241,000). Pre-tax profits, however, fell to £1.05m (£1.25m) as the result last time included an exceptional £696,000 gain on land disposals by an associate.

Turnover rose by 75 per cent to £1.36m (£775,000). Earnings per share were 3.16p (5.13p).

Mr Edwin Hadsley-Chaplin, chairman of both companies, said that since the period-end palm oil and rubber prices had eased but were still well above the five-year average.

West Africa helps Tullow Oil advance by 34%

By Peggy Hollinger

Tullow Oil, the gas and oil producer, yesterday announced a 34 per cent increase in net interim profits to I£838,921 ($1.36m) because of increased contributions from projects in the UK and west Africa.

Mr Thomas Toner, chairman, said the group had enjoyed "another excellent period of growth". Revenues rose by 35 per cent to I£2.3m, and earnings increased 20 per cent to 0.47p.

The company's gas production in Senegal had been at the top end of expectations and the business was generating substantial cash flow. Production was currently running at 8m standard cu ft of gas a day against last year's 2m. The group also benefited from the beginning of gas sales from its onshore UK fields into a North Yorkshire power station.

The exploration programme had also been successful with four of the five wells drilled in Pakistan showing commercial discoveries.

Tullow has budgeted $15m for exploration this year. This would be increased to $30m next year, with the bulk to be focused on Pakistan.

Investors worry about the legal cloud over Govett

Norma Cohen considers problems at the fund management group

Shares in Govett and Co, the international fund management group, have fallen by roughly 12 per cent since Friday as investors try to come to grips with a company in flux.

Late last week, Govett announced a sharp drop in pretax profits for the first six months of this year and issued a profits warning for 1995, implying that a pending legal action has had a disruptive effect on its business.

First, earnings from the core fund management business subsided during the first six months as Govett found itself unable to gain fee income from the launch of new prodncts because of the cloud created by the lawsuit.

Second, because the issue in the lawsuit is conflict between Govett's fund management and its venture capital investment and advisory business, tha senior management of the latter have been preoccupied with their legal defence instead of running that business.

As a result, analysts have cut their forecasts for Govett's 1995 figures. Against 1994's actual earnings per share of 41p, forecast earnings for 1995 range from 22p to 27p. The shares, which closed down 26p yesterday at 253p, are now trading at a multiple of between 11 and 13, instead of the 18 to 25 of other publicly traded fund management companies.

Govett's difficulties heightened last March, when the lawsuit in question caused Govett to abandon a planned acquisition of the US-based fund management husiness of Duff & Phelps, which would have given it critical mass in the fund management industry.

The lawsuit, even by normally litigious US standards, is probably more damaging than most, analysts say.

It alleges that Govett and its chairman, Mr Arthur Trueger, used their positions as managers of an investment trust, the American Endeavour Fund, to their own advantage and against the interests of AEF's investors.

Meanwhile, investors have yet to hear details of the sale of the company's core fund management husinesses, which were placed on the sale block in April in a stunning reversal of Govett'a strategy.

Although Mr Trueger confidently predicted a sale of the entire business within 30 days, a deal has yet to emerge and it is understood that the company is considering splitting the business and selling to two separate bnyers.

Just the fact that the businesses are for sale is mystifying to some ahareholders.

Arthur Trueger: 'We will resist claims filed against us'

In Govett's 1994 annual report, published on March 10, 1995, Mr Trueger said: "I can assure shareholders that we remain fully committed to our goal of creating a substantial Anglo-American fund management organisation with both strong and diverse distribution channels in the UK and US."

The unanswered question for Govett, now that it appears to have abandoned fund management and is having difficulty – albeit temporarily – in its venture capital activities, is what its core business ought to be.

In the near term, it has signalled it intends to reward shareholders – of whom the largest is Mr Trueger himself who had shares and options equal to 34.4 per cent of the equity at the year-end – by distributing to them some of the proceeds of the sale of the fund management company.

It will retain its US-based life insurance business and has said it wishes to expand into the area of variable rate annuities and grow its US distribution network.

It is also retaining its Channel Island-based fund management activities so that it will continue to have a presence in that industry.

But Mr Trueger has warned that fighting the lawsuit will figure prominently in Govett's activities for some time. "We will continne to assert our claims and to resist claims filed against us," he told shareholders in the latest profits announcement.

But analysts note that without its core fund management businesses, Govett is a shadow of its former self, and it has yet to explain to shareholders what activities should replace those it has given up.

هكذا من الأصل

All of these securities having been sold, this announcement appears as a matter of record only.

November 1995

10,580,000 Shares

Donaldson, Lufkin & Jenrette, Inc.

Common Stock

1,840,000 Shares

The above shares were offered outside the United States and Canada by the undersigned.

Donaldson, Lufkin & Jenrette Securities Corporation

Goldman Sachs International

Merrill Lynch International Limited

Morgan Stanley & Co. International

Paribas Capital Markets

Cazenove & Co. | Deutsche Morgan Grenfell | Société Générale | UBS Limited

ABN AMRO Hoare Govett | AXA Banque | Banque Nationale de Paris | Bayerische Landesbank Girozentrale | BBV-Banco Bilbao Vizcaya Interactivos

Commerzbank Aktiengesellschaft | Compagnie Parisienne de Reesoompte | Credit Commercial De France | Credit Lyonnais Securities

Daiwa Europe Limited | Dresdner Bank-Kleinwort Benson | Robert Fleming & Co. Limited | Indosuez Capital | Internationale Nederlanden Bank N.V.

Lazard Brothers & Co., Limited | Peregrine Capital Limited | N M Rothschild and Smith New Court | SBC Warburg

8,740,000 Shares

The above shares were offered in the United States and Canada by the undersigned.

Donaldson, Lufkin & Jenrette Securities Corporation

Goldman, Sachs & Co.

Merrill Lynch & Co.

Morgan Stanley & Co. Incorporated

Sanford C. Bernstein & Co., Inc. | CS First Boston | Bear, Stearns & Co. Inc. | Alex. Brown & Sons Incorporated | Chase Securities, Inc. | Chemical Securities Inc.

Credit Lyonnais Securities (USA) Inc. | Dean Witter Reynolds Inc. | Deutsche Morgan Grenfell | Dillon, Read & Co. Inc. | A.G. Edwards & Sons, Inc.

Hambrecht & Quist LLC | Lazard Frères & Co. LLC | Lehman Brothers | Montgomery Securities | J.P. Morgan Securities Inc. | Oppenheimer & Co., Inc.

PaineWebber Incorporated | Prudential Securities Incorporated | Robertson, Stephens & Company | Salomon Brothers Inc | Schroder Wertheim & Co.

Smith Barney Inc. | Société Générale Securities Corporation | UBS Securities Inc. | S.G.Warburg & Co. Inc. | Allen & Company Incorporated | The Chicago Dearborn Company

Advest, Inc. | Arnhold and S. Bleichroeder, Inc. | Robert W. Baird & Co. Incorporated | William Blair & Company | J. C. Bradford & Co. | JW Charles Securities, Inc.

Cleary Gull Reiland & McDevitt Inc. | Conning & Company | Cowen & Company | Crowell, Weedon & Co. | Equitable Securities Corporation

Fahnestock & Co. Inc. | First Albany Corporation | First Manhattan Co. | First Marathon Securities Limited | First of Michigan Corporation

First Southwest Company | Robert Fleming Inc. | Fox-Pitt, Kelton Inc. | Furman Selz Incorporated | Gruntal & Co., Incorporated | J. J. B. Hilliard, W. L. Lyons, Inc.

Howard, Weil, Labouisse, Friedrichs Incorporated | Interstate/Johnson Lane Corporation | Janney Montgomery Scott Inc. | Johnston, Lemon & Co. Incorporated | Ladenburg, Thalmann & Co. Inc.

Legg Mason Wood Walker Incorporated | McDonald & Company Securities, Inc. | Morgan Keegan & Company, Inc. | Needham & Company, Inc. | Nesbitt Burns Securities Inc.

Neuberger & Berman | The Ohio Company | Parker/Hunter Incorporated | Pennsylvania Merchant Group Ltd | Piper Jaffray Inc. | Principal Financial Securities, Inc.

Ragen MacKenzie Incorporated | Rauscher Pierce Refsnes, Inc. | Raymond James & Associates, Inc. | Richardson Greenshields Securities Inc.

The Robinson-Humphrey Company, Inc. | Roney & Co. | Ryan, Beck & Co. | ScotiaMcLeod (USA) Inc.

Scott & Stringfellow, Inc. | Stephens Inc. | Sutro & Co. Incorporated | Toronto Dominion Securities Inc. | Tucker Anthony Incorporated

Unterberg Harris | Wedbush Morgan Securities | Wheat First Butcher Singer | Wood Gundy Corp.

Anderson & Strudwick Incorporated | Black & Company, Inc. | Brean Murray, Foster Securities Inc. | Davenport & Co. of Virginia, Inc.

Dominick & Dominick Incorporated | Ferris, Baker Watts Incorporated | Hazlett, Burt & Watson, Inc. | C.L. King & Associates, Inc. | Laidlaw Equities, Inc.

WR Lazard, Laidlaw & Luther | Linsco/Private Ledger Corp. | Ormes Capital Markets Inc. | Pryor, McClendon, Counts & Co., Inc.

Sands Brothers & Co., Ltd. | Muriel Siebert & Co., Inc. | Sterne, Agee & Leach, Inc.

Roddicks considering buying back Body Shop

By Neil Buckley

Anita and Gordon Roddick, founders of Body Shop International, are in discussions over buying back the "green" cosmetics group – although the board said it had received no proposal from them, and expected none "in the near future, if at all".

The Roddicks, who floated the business for £4.6m in 1984, have held discussions with banks on turning the business into a charitable trust, although no agreement has been reached. One adviser said chances of agreement were "50-50".

Such a move would allow the Roddicks to devote more of their profits to environmental and humanitarian causes – such as their campaign against death sentences passed on leaders of Nigeria'a Ogoni people, which Ms Roddick in writes about in a letter to the FT today.

Body Shop's shares touched a low of 107p this year, after reaching a peak of more than 350p in 1990, after it issued a second profits warning in three years.

It hlamed falling underlying sales in the US, its largest division. The shares rose 21p yesterday to 156p.

The Roddicks want to pitch any offer at less than 200p a share, but the City believes the minimum price would be 175p, valuing the group at about £332m.

The leak of the discussions prompted speculation that this could lead to approaches from other groups. Some analysts suggested the business was too closely associated with the Roddicks for a bid by a third party to be credible.

The Roddicks have heen planning a huy-back for several months because of dissatisfaction over the "short-termist" attitudes of the City.

The Roddicks are being advised by Morgan Stanley, the US investment bank, which has arranged senior lending, but has not secured mezzanine financing. Body Shop's non-executive directors are heing advised by Goldman Sachs.

The company's founders have gained the agreement of Mr Ian McGlinn, the former garage owner who still owns 28 per cent of the business, after lending Ms Roddick £4,000 in 1976.

Mr McGlinn is thought to have given undertakings to accept loan notes in exchange for his shares. The Roddicks would hand over their 24 per cent stake to the proposed trust.

Letter, Page 14; Lex, Page 16; Nigerian death santence, Page 7

Panel rules on use of derivatives during bids

The Takeover Panel is to modify the rules governing tha use of derivatives after a bid has commenced to bring the instruments into line with other disclosure provisions.

However, it said yesterday it would not take further action over derivatives that allow the bidder to profit from the upward movement in the target's share price - the so-called "contracts for differences".

The Panel was responding to concerns raised by Trafalgar House and its adviser, Swiss Bank Corporation, which used the device as part of its bid for Northern Electric earlier this year.

The Panel said it had taken the view that buying derivatives ahead of a bid should be covered by the same rules which govern buying ordinary shares in a target company.

Indonesia fund

A fund investing in Indonesia is being set op hy Jopiter Asset Management, part of Jupiter Tyndall, the investment management business owned hy Commerzbank.

The Indonesia Fund will be managed by Jupiter Tyndall together with Dharmala Investment Management Services. It has so far attracted $50m of which 20 per cent comes from other funds managed by Jupiter Tyndall.

A placing of international depositary receipts for shares will be sponsored hy James Capel. Warrants and warrant IDRs will be issued on a 1-for-5 basis. The shares, warrants and IDRs will be listed on the London Stock Exchange.

Intl Greetings

International Greetings, a supplier of private label greetings products, has been admitted to the Alternative Investment Market (Aim).

Up to 100,000 ordinary shares have been placed at 450p each by brokers, Neilson Cobbold, giving the company a market value of £18.9m. It has also raised £3m by means of an issue of preference shares to Throgmortoo Preferred Income Trust.

Thames Water rules itself out of electricity takeover

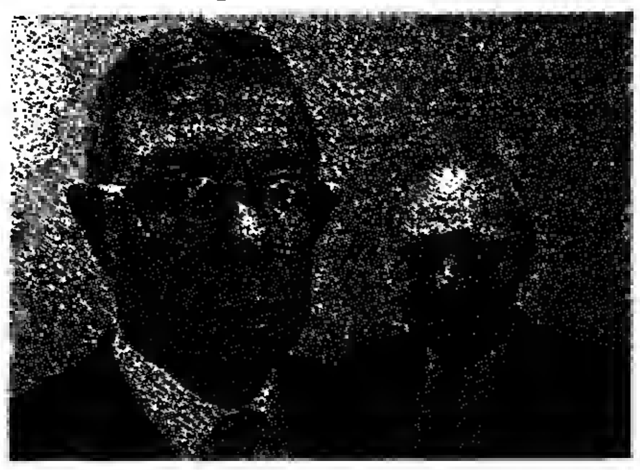
By Peggy Hollinger

Thames Water yesterday quashed takeover speculation by ruling itself out as e potential bidder for London Electricity. However, it revealed that it was in discussions with the regional utility which could lead to a joint venture. Thames made the announcement as it reported a 10 per cent rise in interim pre-tax profits to £165m ($260m), on turnover 5 per cent higher at £599m.

Sir Robert Clarke, chairman, said it could not justify paying the sort of premium currently needed to acquire a regional electricity company. However, significant cost savings could be achieved by collaborating in areas such as customer service and information technology.

The market estimates the savings from collaboration could be as much as £15m per company, against the estimated £70m North West Water could make if it succeeds in its takeover bid for Norweb.

An announcement on the discussions is expected in the next two months.



Trevor Humphries

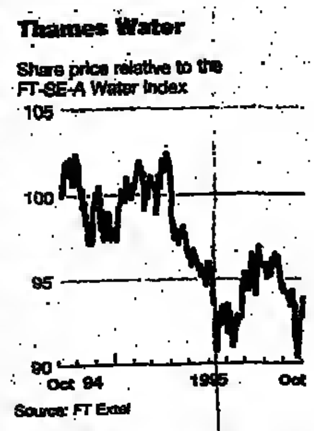
Mike Hoffman, left, and Sir Robert Clarke: savings collaboration

Thames accompanied the results with a higher than expected dividend increase of 12 per cent to 9.2p, from earnings 7 per cent up at 39.3p. The company attacked the industry regulator for his comments earlier this week that substantial dividend increases should be justified by greater than expected efficiency savings.

"We do not think the regulator should have any involvement in the dividend programme," said Mr Mike Hoffman, chief executive.

LEX COMMENT

Thames Water



Source: FT Extel

Shareholders should be relieved that Thames Water has ruled out a bid for London Electricity. Given that Loodon's shares have risen 60 per cent since March, a bid would have been an expensive folly. Shareholders cannot, though, have their cake and eat it. Thames and London are right to try to cut costs through collahoration instead of a merger, but there is as yet no clear plan. Even when there is, cost-cutting is unlikely to produce savings on the scale that North West Water has in mind following its takeover of Norweb. Thames is not under the same pressure to deliver. Meanwhile Thames risks antagonising its regulator, Mr Ian Byatt. The company's robust position – that the regulator should worry about prices and leave dividends alone – pointedly contradicts Mr Byatt's view, expressed only the day before, that higher profits should be shared with customers. The company may be right in theory, but it is still playing a risky game.

Even without regulatory problems so far, Thames has still underperformed the sector. Lingering doubts about its noo-core activities are part of the explanation. Like many regulated utilities, Thames wanted to expand into areas where it would be free from regulation. In practice, the non-core operations have lost money and the core business has had to bail them ont. Some of the international investments may come good but the jury is out. Living with regulation may be tough, but it does not follow that competitive markets are any easier.

Le Creuset plans to go private

By Heather Davidson

A London quote appears to hold no attractions for Le Creuset, the cookware and tableware company. After six years on the USM, it is considering a return to private status when the market closes at the end of next year.

The company, based in Fresnoy-le-Grand, France, said it did not believe it had achieved "any real benefits" from its USM quotation, and that the "costs and inconvenience of maintaining it" had not been wholly justified. Nor did it believe that moving to the Aim would be in its interests.

The shares rose 18p to 177p.

Mr Paul van Zuydam, chairman and holder of 73.7 per cent of Le Creuset's issued capital, is in discussions with a funding consortium with a view to buying out the minority shareholders at a premium to the current market price. The company intends to put full proposals to shareholders before the end of December.

It was Mr van Zuydam, a former chairman and chief executive of The Prestige Group, who took over Le Creuset in January 1988 and floated it on the USM in July the following year at 135p per share.

Meanwhile yesterday, it reported a "disappointing" first half to June 30, with pre-tax profits declining from £1.07m to £117,000. The result was after an exceptional charge of £744,000 relating to forward currency cover for an acquisition that was not completed.

هكذا من الأصل

COMMODITIES AND AGRICULTURE

Speaker Gingrich rescues US maize-ethanol subsidy

By Afshin Molavi in Washington

Mr Newt Gingrich, speaker of the US House of Representatives, has rescued politically potent ethanol producers from an attempt by a key House committee to reduce America'a long sacrosanct ethanol tax credits.

The House Ways and Means Committee surprised veteran Capitol Hill observers last September by proposing a three cent reduction in the 54 cents-a-gallon tax break for ethanol, pushing America's powerful ethanol lobby into an aggressive defence of the credit.

That was after Mr Bill Archer, chairman of the committee and a key Gingrich deputy, said the "ethanol subsidy contained in the tax code is inappropriate and should he substantially modified". It was estimated that $3.5bn would be saved over seven years by curbing these tax credits.

Ethanol, a maize-based gasoline additive is produced by distilling maize into alcohol. It is then mixed with gasoline to produce gasohol, a motor fuel.

Mr Gingrich wielded his considerable influence in the House legislation process to eliminate the three cent tax cut proposal despite the 22-15 House Ways and Means vote favouring it.

Since 1979 when the ethanol tax credit was introdnced, high-powered egri-husiness giants, the maize lobby, and some environmental groups have effectively persuaded America'a politicians to favour the credit despite the flood of government and private reports criticising the subsidy.

Mr Dwayne Andreas, chairman of the Archer-Daniels Midland Company (ADM), is widely seen as the man behind ethanol's influence in Washington. A generous political donor, Mr Andreas has given more than $2m to American politicians since 1991. ADM is the largest producer of ethanol in the world.

Staunch Andreas allies include Senate majority leader Mr Bob Dole, who is sometimes referred to as "Senator Ethanol", and Mr Gingrich.

Republicans have come under fire from critics who complain that the US ethanol tax credit is simply a subsidy for rich corporations. "The Ethanol subsidy is one of the most egregious examples of corporate welfare," says Mr James Bovard, an analyst with the conservative Cato institute and severe critic of America'a ethanol policy. "It is virtually a gift to ADM from their many friends in Washington," he added.

Ethanol advocates say the tax credit improves the income of maize farmers, creates jobs acroas rural America, decreases US reliance on foreign oil, and contributes to cleaner air.

The ethanol industry provides an extra 600,000 bushels of market to America's maize growers. "This tax credit cut would have capped growth and ultimately destroyed the ethanol industry, thereby severely hurting America's farmers," says Mr Keith Heard of the National Corn [maize] Growers Asaociation, who lobbied intensely against the tax credit cut. "How could such a move be beneficial to the country?"

Opponents of the US ethanol subsidy programme argue that the tax credit artificially inflates the price of maize, is a blatant form of corporate welfare for agri-business giants such as ADM, is an unfair burden on US taxpayers, and promotes a fuel that is not as environmentally friendly as originally thought.

Grain prices remain high as world-wide supplies are at low levels so, opponents say, now is the time to cut the tax credit withont endangering America's maize farmers.

Mr Gingrich feared a mid-western maize state Republican revolt on the larger budget bill if the ethanol provisions remained and, therefore, acted to head off the opposition, "despite his belief that this type of corporate welfare should he overhauled," a senior Republican Congressional official said.

Lead and zinc supply deficits seen continuing

By Richard Mooney

The world lead and zinc markets are likely to remain in deficit this year and next, according to the International Lead and Zinc Study Group.

In its latest market assessment, published yesterday, the group forecasts zinc output in 1995 et 7.21m tonnes, rising to 7.39m next year, wbile consumption is pnt at 7.3m tonnes in 1995 and 7.43m in 1996.

For lead, the ILZSG sees world production at 5.42m and 5.49m tonnes for 1995 and 1996 respectively and consumption at 5.43m and 5.54m.

LME WAREHOUSE STOCKS (As at Monday's close) tonnes		
Aluminium	-500	to 530,475
Aluminium alloy	+420	to 49,160
Copper	+2,500	to 193,450
Lead	-650	to 193,525
Nickel	-822	to 51,372
Zinc	-13,375	to 710,250
Tin	-170	to 13,855

After rising by 5.6 per cent to 5.85m tonnes in 1994, the fourth advance in succession, zinc consumption in the western world is continuing to rise strongly "and is expected to increase by 5.7 per cent to 6.18m tonnes in 1995" the study group says. Strong growth is forecast in South-east Asia, especially South Korea, Indonesia and the Philippines; "the recovery is continuing in Europe and the growth is being maintained in the US".

Thanks principally to rises in Canada, the US, Bolivia, Spain, Turkey and Tunisia western world mine output of zinc is projected to increase by 4.9 per cent to 5.39m tonnes this year, bnt metal production is seen rising by only 1 per cent to 5.43m tonnes. "Exports from eastern countries to the West have fallen," the ILZSG says, "and western world demand is substantial exceeding supply, leading to a rapid drawing down in stocks."

Growth in western world consumption is forecast to slow to 1.7 per cent next year, taking the figure to 6.29m tonnes, as expected rises of about 1.5 per cent in the US and Europe and a sustained advance in South-east Asia are countered by a projected 6.2 per cent decline in Japan. On the supply side mine output is forecast to be up 7.5 per cent at 5.79m tonnes but metal output is likely to rise by only 2 per cent to 5.54m tonnes, the study group says. "It is anticipated that western world demand will again exceed supply," it concludes.

Further zinc consumption gains are also forecast in eastern Europe and China in 1995 and 1996, but Russian demand is expected sbow a decline for this year.

Western world lead consumption is put at 4.84m tonnes this year, up 1.4 per cent from 1994's record of 4.77m. The slowdown from 1993's 5.9 per cent growth rate is "principally due to an anticipated 2.2 per cent fall in the United States", the ILZSG says. "Growth of 4.2 per cent is indicated in western Europe but a 4 per cent decline is likely in Japan." Further expansion is seen in South-east Asia, where South Korean demand is projected to rise by 7.3 per cent. Western world mine output is forecast to remain below 2m tonnes but metal output should expand by 2.7 per cent to 4.6m tonnes.

Next year western world lead consumption is seen rising by 2 per cent to 4.94m tonnes, with metal output rising by only 1.1 per cent to 4.65m tonnes, despite an expected 9.8 per cent advance in mine production resulting mainly from expansion plans in Australia, Canada and the US.

In eastern Europe, "mine output [of lead] is expected to remain generally stable in 1995 and 1996," the study group says. "A 9 per cent fall is forecast for China in 1995, followed by a 2.4 per cent rise in 1996.

Mr Foissey tracks down Frances' fruit pirates

David Buchan talks to the horticultural private detective who cracked the case of the stolen apricots

Mr Jean-Pierre Foissey is one of a new breed – a private detective for fruit-inventors and growers who want to protect their patents and licences against piracy.

This 43-year-old French fruit sleuth claims that piracy is rising, as fruit producers try to maintain their position in an increasingly competitive market by getting their hands on new varieties without paying licence and royalty fees.

"A new variety can cost FFr5m-FFr10m [£650,000-£1.3m] and take ten to 15 years to develop", says Mr Foissey. If inventors do not get proper reward for their time and money, innovation will dry up. Likewise, "growers pay between FFr50,000 and FFr150,100 for a licence", and bave to factor that into the price of their fruit, which pirates can undercut.

Fruit piracy has taken on an international dimension. Despite the fact that southern France grows vast quantities of apricots, peaches, apples and other fruit, "very few new varieties are invented in France and most come from abroad", says Mr Foissey, interviewed recently at the fruit farm of one of his major clients, Mr Pierre Riou, whose Chateau-Pérouse operation near Nimes sells to several big supermarket chains, including Sainsbury's in the UK.

Mr Pierre Riou: His apricot licence from Washington State University was pirated by a neighbouring nurseryman

Mr Riou himself has bought some 20 licences from the US, Canada, New Zealand to grow and sub-licence in Europe new varieties of apricot, cherries, plums and so called "inter-specific" apricot-plum hybrids. Mr Riou said he was first alerted to the piracy problem two years ago with an apricot licence he bought from Washington State university in the US.

The local French nurseryman to whom he gave his Washington State apricot cuttings "illegally increased the number of trees and re-sold them as another brand of apricot". Mr Rion got a court injunction to stop further sales, and obtained cash compensation from growers who had already received and re-planted the pirated trees. But he still has a civil damages case outstanding against a Rhône valley nurseryman who denies all wrong-doing after allegedly ploughing up his nursery near Valence in attempt to avoid detection.

Mr Foissey, who helped Mr Riou crack the case of the stolen apricots, says the pernicious aspect of fruit piracy is that "there is no difference, or deterioration, in the quality of counterfeited fruit". In this sense, it is more like the copying of videotapes rather than, for instance, producing counterfeit Cartier watches, whose quality is usually inferior, he says. "Just do a little grafting, and yon can reproduce as much as you like".

But with a trained eye and a little science, Mr Foissey, who once ran the licensing office of Meilhand, the big rose-growing company, says detection is possible. He has seven or eight people working for him, watching nurseries, orchards, wholesale markets like Paris' Rungis market and big supermarket chains for the sudden appearance of new varieties. Their reports are then cross-checked against historic data from the growing region concerned.

If this produces a discrepancy, then comes the tricky part of taking physical samples directly from suspect nurseries or orchards. This has sometimes led to Mr Foissey being thrown off people's land, but partly because of what he describes as a sympathetic view from local police he has so far avoided any trespass charges.

With the help of specialists in Spain and in the French government's INRA network of agricultural research laboratories, Mr Foissey says he is "in the process of developing DNA techniques to spot counterfeiting, because it produces results which are quicker and less contestahle". This genetic detective work "works well for table grapes, and we are trying to use it for stoned fruit" like apricots and peaches. DNA techniques are especially useful for identifying the parentage of individual fruit, on which there is less to go on than with trees, he points out.

On the detection side, Mr Foissey has also returned to his borticultural roots by doing some work for "Belgians, German and French who want to protect their varieties of chrysanthemums".

An essential counterpart to the detective work is proper control of licences, says Mr Foissey whose business card announces him as "Distributor of Licences – Defender against Counterfeits".

"If yon don't have a good licence distribution system, and proper remuneration of inventors and of licensors/licensees, then you just find yourself endlessly running behind the fraudsters".

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE

(Prices from Amalgamated Metal Trading)

■ ALUMINIUM, 99.7 PURITY ($ per tonne); ■ ALUMINIUM ALLOY ($ per tonne); ■ LEAD ($ per tonne); ■ NICKEL ($ per tonne); ■ TIN ($ per tonne); ■ ZINC, special high grade ($ per tonne); ■ COPPER, grade A ($ per tonne)

	Cash	3 mths
Close	[illegible]	[illegible]
Previous	[illegible]	[illegible]
High/low	[illegible]	[illegible]
AM Official	[illegible]	[illegible]
Kerb close	[illegible]	[illegible]
Open int.	[illegible]	
Total daily turnover	[illegible]	

■ LME AM Official £/$ rate: 1.5771

LME Closing £/$ rate: 1.5821

Spot: 1.5809 3 mths: 1.5779 6 mths: 1.5752 9 mths: 1.5718

■ HIGH GRADE COPPER (COMEX)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PRECIOUS METALS

■ LONDON BULLION MARKET (Prices supplied by N M Rothschild)

	$ price	£ equiv	SFr equiv
Gold(Troy oz)	[illegible]	[illegible]	[illegible]
Close	[illegible]		
Opening	[illegible]		
Morning fix	[illegible]	[illegible]	[illegible]
Afternoon fix	[illegible]	[illegible]	[illegible]
Day's High	[illegible]		
Day's Low	[illegible]		
Previous close	[illegible]		

Loco Ldn Mean Gold Lending Rates (Vs US$)

1 month	[illegible]	6 months	[illegible]
2 months	[illegible]	12 months	[illegible]
3 months	[illegible]		

Silver Fix	p/troy oz.	US cts equiv.
Spot	[illegible]	[illegible]
3 months	[illegible]	[illegible]
6 months	[illegible]	[illegible]
1 year	[illegible]	[illegible]

Gold Coins	$ price	£ equiv.
Krugerrand	[illegible]	[illegible]
Maple Leaf	[illegible]	
New Sovereign	[illegible]	[illegible]

Precious Metals continued

■ GOLD COMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol.	Open int
Nov	383.0	+0.5	-	-	-	-
Dec	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ PLATINUM NYMEX (50 Troy oz.; $/troy oz.); ■ PALLADIUM NYMEX (100 Troy oz.; $/troy oz.); ■ SILVER COMEX (5,000 Troy oz.; Cents/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ENERGY

■ CRUDE OIL NYMEX (42,000 US galls. $/barrel); ■ CRUDE OIL IPE ($/barrel); ■ HEATING OIL NYMEX (42,000 US galls; c/US galls); ■ GAS OIL IPE ($/tonne); ■ NATURAL GAS NYMEX (10,000 mmBtu; $/mmBtu); ■ UNLEADED GASOLINE NYMEX (42,000 US galls; c/US galls)

	Latest price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

GRAINS AND OIL SEEDS

■ WHEAT LCE (£ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	121.70	-	122.50	121.70	61	487
Jan	124.40	-	125.00	124.40	56	2,307
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ WHEAT CBT (5,000bu min; cents/60lb bushel); ■ MAIZE CBT (5,000 bu min; cents/56lb bushel); ■ BARLEY LCE (£ per tonne); ■ SOYABEANS CBT (5,000bu min; cents/60lb bushel); ■ SOYABEAN OIL CBT (60,000lbs; cents/lb); ■ SOYABEAN MEAL CBT (100 tons; $/ton); ■ POTATOES LCE (£/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ FREIGHT (BIFFEX) LCE ($10/index point)

	Sett price	Day's change	High	Low	Vol	Open int
Oct	1665	+5	-	-	-	501
Nov	1610	+28	1625	1595	63	489
Dec	1600	+22	1625	1585	135	284
Jan	1590	+25	1615	1580	114	1,208
Apr	1585	+25	1605	1570	79	1,130
Jul	1431	+16	1450	1415	80	387
Total					473	4,102

	Close	Prev
BFI	1547	1551

FUTURES DATA

All futures data supplied by CMS.

Minor Metals

European free market, from Metal Bulletin, $ per lb in warehouse, unless otherwise stated (last week's in brackets, where changed). Antimony: 99.6%, $ per tonne, 3,150-3,350 (3,600-3,900). Bismuth: min. 99.99%, tonne lots 4.00-4.20 (4.00-4.10). Cadmium: min. 99.95%, 200-210 (205-210) cents a pound. Cobalt: MB free market, 99.8%, 30.00-31.00 (29.70-30.20); 99.3%, 26.80-27.30 (26.10-26.60). Mercury: min. 99.99%, $ per 76 lb flask, 150-170 (145-165). Molybdenum: drummed molybdic oxide, 4.40-4.70 (4.45-4.80). Selenium: min 99.5%, 3.80-4.60. Tungsten ore: standard min. 65%, $ per tonne unit (10kg) WO_3, cif, 62-70. Vanadium: min. 98%, cif, 3.10-3.30 (3.00-3.10). Uranium: Nuexco exchange value, 9.50.

SOFTS

■ COCOA LCE (£/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	920	-6	924	917	1,028	19,666
Mar	951	-5	953	947	1,001	33,029
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ COCOA CSCE (10 tonnes; $/tonnes); ■ COCOA (ICCO) (SDR's/tonne); ■ COFFEE LCE ($/tonne); ■ COFFEE 'C' CSCE (37,500lbs; cents/lbs); ■ COFFEE (ICO) (US cents/pound); ■ No7 PREMIUM RAW SUGAR LCE (cents/lbs); ■ WHITE SUGAR LCE ($/tonne); ■ SUGAR '11' CSCE (112,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ COTTON NYCE (50,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	84.69	-1.19	86.21	84.56	7,789	22,478
Mar	83.98	-0.50	84.70	83.50	4,885	17,053
May	84.42	-0.13	85.00	83.70	599	8,019
Jul	83.85	-0.25	84.55	83.65	584	6,332
Oct	79.55	+0.47	79.60	79.00	64	1,335
Dec	76.41	+0.31	76.55	76.20	418	6,533
Total					14,337	62,767

■ ORANGE JUICE NYCE (15,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	117.70	+0.45	117.95	116.80	804	2,143
Jan	118.85	-	119.00	116.60	1,196	14,909
Mar	121.15	+0.90	121.20	119.80	78	2,938
May	123.40	+0.90	123.50	123.00	6	1,357
Jul	125.80	+1.05	-	124.75	4	527
Sep	128.00	+3.00	-	-	2	350
Total					2,090	22,523

VOLUME DATA

Open interest and Volume data shown for contracts traded on COMEX, NYMEX, CBT, NYCE, CME and CSCE are one day in arrears.

INDICES

■ REUTERS (Base: 18/9/31=100)

Oct 31	Oct 30	month ago	year ago
2101.9	2098.8	2088.4	2099.3

■ CRB Futures (Base: 1967=100)

Oct 30	Oct 27	month ago	year ago
241.98	241.45	-	-

■ GSCI Spot (Base: 1970=100)

Oct 30	Oct 27	month ago	year ago
182.71	182.06	181.08	180.24

MEAT AND LIVESTOCK

■ LIVE CATTLE CME (40,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	68.350	-0.300	68.725	68.300	4,673	30,853
Feb	67.550	-0.225	67.900	67.500	1,830	15,805
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ LIVE HOGS CME (40,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Jul	51.750	+0.050	51.800	51.525	108	1,475
Aug	50.950	-	50.950	50.750	24	674
Total					3,157	28,164

■ PORK BELLIES CME (40,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Feb	61.275	-0.375	61.500	60.800	1,308	5,632
Mar	61.250	-0.250	61.300	60.775	89	729
May	61.900	-0.350	62.200	61.700	15	225
Jul	63.600	+0.125	63.000	62.475	51	567
Aug	60.700	-0.200	61.075	60.700	1	61
Total					1,466	7,414

LONDON TRADED OPTIONS

Strike price $ tonne	— Calls —		— Puts —	
■ ALUMINIUM (99.7%) LME	Dec	Feb	Dec	Feb
1600	97	138	11	29
1700	35	79	49	67
1800	8	39	121	126
■ COPPER (Grade A) LME	Dec	Feb	Dec	Feb
2600	152	136	17	49
2700	83	82	47	93
2800	38	45	101	154
■ COFFEE LCE	Jan	Mar	Jan	Mar
2400	87	-	202	-
2450	73	-	239	-
2500	61	-	276	-
■ COCOA LCE	Dec	Mar	Dec	Mar
875	49	91	4	15
900	30	74	10	23
925	17	58	22	32
■ BRENT CRUDE IPE	Dec	Jan	Dec	Jan
1550	91	61	11	24
1600	47	54	10	41
1650	18	34	31	67

LONDON SPOT MARKETS

■ CRUDE OIL FOB (per barrel/Dec)		+or-
Dubai	$15.56-5.61z	-0.015
Brent Blend (dated)	$16.55-6.57	+0.10
Brent Blend (Dec)	$16.35-6.37	+0.10
W.T.I. (1pm est)	$17.65-7.67z	+0.12

■ OIL PRODUCTS NWE prompt delivery CIF (tonne)		
Premium Gasoline	$180-182	+3.5
Gas Oil	$155-156	+1
Heavy Fuel Oil	$85-88	+0.5
Naphtha	$154-156	-1.5
Jet fuel	$176-178	+3
Diesel	$159-160	+1

Petroleum Argus. Tel. London (0171) 359 8792

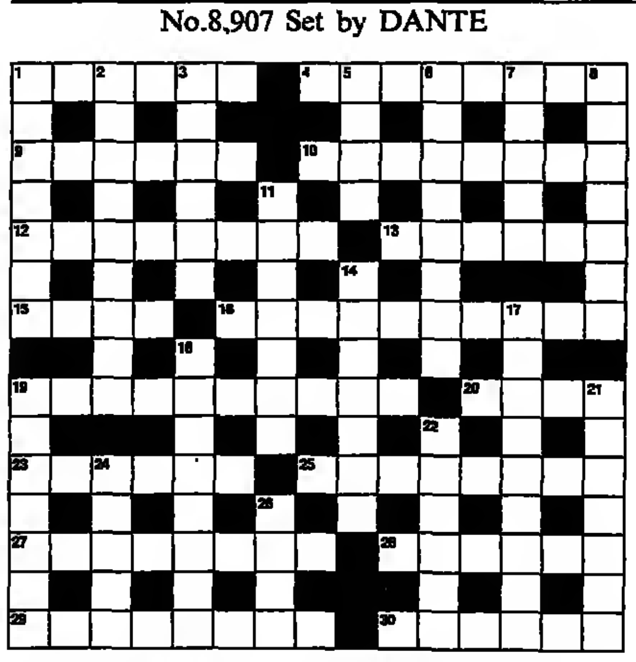
■ OTHER		
Gold (per troy oz)♣	$382.70	+0.60
Silver (per troy oz)♣	536.5c	+3.0
Platinum (per troy oz.)	$410.00	+3.75
Palladium (per troy oz.)	$138.50	+0.75
Copper	125.0c	
Lead (US prod.)	41.75c	
Tin (Kuala Lumpur)	15.73m	+0.08
Tin (New York)	309.5c	+11.0
Cattle (live weight)†	127.16p	-0.14*
Sheep (live weight)†♠	108.13p	+2.61*
Pigs (live weight)†	88.08p	+0.52*
Lon. day sugar (raw)	$308.90	+0.50
Lon. day sugar (wte)	$378.00	+10.0
Barley (Eng. feed)	£116.5	
Maize (US No3 Yellow)	£105.0w	
Wheat (US Dark North)	Unq	
Rubber (Nov)♥	99.50p	-0.75
Rubber (Dec)♥	99.50p	-0.75
Rubber (KL RSS No1)	378.0m	-1.5
Coconut Oil (Phil)§	$735.0u	+7.5
Palm Oil (Malay.)§	$620.0	
Copra (Phil)§	472.0y	+8.0
Soyabeans (US)	193.0	
Cotton Outlook'A' index	89.65c	+0.50
Wooltops (64s Super)	458p	

£ per tonne unless otherwise stated. p pence/kg. c cents/lb. r ringgit/kg. m Malaysian cents/kg. z Dec. u Nov/Dec.♥ w Nov. y Nov/Dec. x Oct/Dec London Physical. § CIF Rotterdam. ♣ Bullion market close. ♠ Sheep (Live weight prices). * Change on week † Prices are for previous day.

JOTTER PAD

CROSSWORD

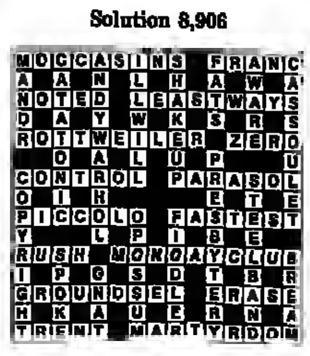
No.8,907 Set by DANTE



ACROSS
1 Prey of little boys (6)
4 Copies I revise at times (8)
9 Get ready for the spring (6)
10 An example of ill-humour (4,4)
12 It comes in to fight on the other side (8)
13 Critical point of eating a biscuit (6)
15 A form of window decoration (4)
16 Addresses of single persons (10)
19 There are strong links between their members (5,5)
20 Abraham Lincoln, to start with, was murdered (4)
23 Cut and ran (6)
25 Directions for making machine parts (8)
27 Acts as a superintendent abroad, we hear (8)
28 Lively turn I've put on (6)
29 The author is not in (8)
30 Sayings of modern times (6)

DOWN
1 Conqoerors of six bundred hills (7)
2 Widespread irregularity in the main? (6,3)
3 Packed against tbe unexpected (2,4)
5 Chain letters? (4)
6 Become established down under? (4,4)
7 The point of growing roses (5)
8 Observes the intrusion and is furious (7)
11 Old Empire, lacking arms, lacks backing (7)
14 Not huge but shaped to became robust (7)
17 Stiff – but relaxing (9)
18 Inexperienced and presumably prosaic (8)
19 Sort of clotbing for resting actors? (4,3)
21 Attends and possibly enlists (7)
22 Found and copied (6)
24 Nothing disturbs bees like being over-weight (5)
26 Study occupied by a college-bead (4)

Solution 8,906



Canadian issues lose overnight gains

By Lisa Bransten in New York and Michael Smith in London

Longer-term Canadian government bonds came down to earth in early trading yesterday after soaring in overnight trading after it became clear tbat tbe Québécois bad rejected independence froo Canada. Meanwhile, the short end of the curve moved higber after the Bank of Canada moved to ease interest rates.

Near midday, the benchmark 10-year bond was off 0.41 at 101.58 to yield 7.544, while the two-year note was up 0.10 at 100.96 to yield 6.419.

Ten-year bonds jumped nearly two full points in trading on Asian and European markets as the results of Monday's polling were released. "It was a monster move and a direct response to the removal of Quebec risk," said Mr Carl Weinberg of High Frequency Economics.

Mr Karim Basta, of Merrill Lyncb in New York, attributed the slip at the long-end to profit-taking. "Tbose wbo have been positioned for a 'no' vote are taking profits and tbose not willing to get in until this risk was eliminated will contioue to buy," be said and expected good two-way trading flow in the next few days.

Earlier, the Bank of Canada effectively trimmed the target call-loan rate by ¼ to 5¾ per cent through repurchase and special sale agreements.

■ US Treasuries see-sawed through positive and negative territory as strooger than expected figures on business activity threw the market off its generally bullish tone.

Near midday, the bencbmark 30-year Treasury was $\frac{1}{32}$ higher at 107$\frac{1}{32}$ to yield 6.328 per cent. At the short end of tbe maturity spectrum, the two-year note was unchanged at 100, to yield 5.608 per cent.

Bonds began the day modestly higher only to dip mid-morning after the Chicago Association of Purcbasing Management said its index of business activity rose to 53.4, the first time It has been above the critical 50-point level since May and the first sign of expanding manufacturing activity since February.

The regional report is seen as a good preview to the national report, which is set for release today.

The market drew some support from consumer confidence figures. The Conference Board's index of consumer confidence slipped to 97 in October from 97.3 in September, while most economists were expecting a modest increase in sentiment.

The figure helped shore up Wall Street's increasingly dour outlook for retail sales. Economists from Donaldson, Lufkin & Jenrette said: "The deterioration in confidence during the past two months fits well with the recent retrenchment in consumer spending and does not bode well for the Christmas holiday season."

GOVERNMENT BONDS

■ European markets showed further improvements, with UK gilts among the better performers. The gilt yield spread over German bunds narrowed from 186 basis points a week ago to 167 basis points, the lowest level of the past fortnight.

The market was given a fillip after a £250m tap by the Bank of England was exhausted. Traders said there was a distinct absence of gilt sellers and expected the positive mood to continue today at least.

The market will be keeping an eye on the meeting today between the chancellor of the exchequer and the Bank of England governor, although few surprises are expected.

Mr Simon Briscoe of Nikko Europe expects higher gilts to prompt some profit-taking but still forecasts a "gently bullish trend" in the run-up to tha November 28 Budget.

■ German bunds narrowed their yield spread over US Treasuries and widened the gap against other European bonds except gilts. The December bund future on Liffe settled at 96.63, up 0.29 points. In the absence of any fundamental domestic news, traders lcoked ahead to tomorrow's tender of securities repurchase agreements, with most expecting a fall of one or two basis points.

Mr John Sheppard of Yamaichi, said: "A move of one or two points is normally neither here nor there but any move down is a move in the right direction."

■ Italian futures climbed late in tbe day but trade was lethargic ahead of the public boliday in much of Europe.

Trading was also slow in France. Dealers said tbere were some moves into Denmark but sentiment remained positive and bonds ended higher. The French Treasury approved the selection of three banks – Merrill Lynch Finance, ABN Amro Finance and Cie Finance BZW – as reporting dealers. A bank's appointment as a reporting dealer is usually the first stage in becoming a primary dealer.

Sovereign debt fund to concentrate on Bradys

By Antonia Sharpe

A new closed-end fund investing in emerging market debt expects to attract between £40m and £100m from institutional and sophisticated retail investors by the time it is launched by the end of November.

The Sovereign Debt Fund, which will be managed by Baring Asset Management, will concentrate on Brady bonds – which are issued by governments in exchange for distressed commercial bank debt – because of their high level of liquidity.

Mr Michael Mabbutt, fixed-interest investment manager at BAM, said at least 85 per cent of the fund would be invested in sovereign debt wbile the rest conld be invested in corporate debt. Also, at least 85 per cent would be invested in dollar-denominated instruments in order to limit exposure to local currencies.

He said the main attraction of the fund would be the high return. He noted that tha Brady bond market currently yielded 1,200 basis points over US Treasuries, giving a yield to maturity of 18 per cent.

However, the fund could also benefit from a contraction in the yield spread which he considered to be too wide to compensate for the risk, Mr Mabbutt said. In his view, the spread should be closer to 600 basis points, a level last seen before the Mexican peso crisis at the end of 1994.

Abont 60 to 65 per cent of tba fund is likely to be invested in Latin American debt, though not more than 25 per cent can be invested to one country.

The remainder will be split between emerging markets in Europe, Asia, Africa and the Middle East.

Gazprom poised to step up search for foreign partners

By Chrystia Freeland in Moscow and Robert Corzine in London

Growing political uncertainty in Russia may prompt Gazprom, Russia's gas monopoly, to step up its search for foreign investors.

The company, which is seeking to conclude an alliance with one or two big western energy companies, is closely associated with the current Russian government of Mr Victor Chernomyrdin, the prime minister and former bead of Gazprom.

But growing evidence of popular dissatisfaction with the government has called into question bow much longer Gazprom may enjoy such high level political support.

In the past, Gazprom's close links with Mr Chernomyrdin guaranteed the company a privileged position in the Russian economy. But over the past few weeks, the pro-government political party led by Mr Chernomyrdin, Our Home is Russia, has suffered several setbacks and communist and nationalist politicians have taken the lead in opinion polls.

The heart attack suffered last week by President Boris Yeltsin has added to worries that Russia is on the brink of a period of political instability which could threaten the country's fragile market economy.

The mood of the Russian electorate is bad news for Gazprom, because it is one of the Russian companies most closely associated with the current regime. Opposition politicians regularly accnse Mr Chernomyrdin of profiting from the partial privatisation of Gazprom. They also say the gas monopoly has received preferential treatment from Moscow because of its close links with the premier.

Gazprom executives, including Mr Rem Viakherev, its current president, believe foreign investors could serve as a shield against politically motivated attacks by a new government run by communists and nationalists.

There is speculation in Moscow that the company may be seeking a deal ahead of December's parliamentary elections.

Last week Kleinwort Benson, the UK merchant bank advising Gazprom, announced that a convertible bond would form the centrepiece of the effort to bring a western energy company on to the Gazprom share register.

Company executives last week told a conference in London that Gazprom was keen to expand its share of the western European gas market. They said Gazprom wanted to be Europe's "biggest gas supplier" in the next decade. But to do so it needed to make "significant additional investments".

A deal with a western company will be linked to commercial agreements, according to Gazprom's western advisers. But it will also play a crucial role in the company's overall financial strategy.

A successful trade sale could boost the value of Gazprom shares traded in Russia. It would also pave the way for a private placement of shares to western institutional investors.

It is not clear how much of Gazprom's stock will be committed to the convertible bond which will be offered to a western energy company. Nine per cent of Gazprom's shares have been reserved for foreigners, but there is a 3 per cent limit for any singla buyer.

Mr Philip Lambert, head of the Kleinwort Benson team advising the company, said the shares would be offered in tranches in order to gain the maximum value.

Activity muted ahead of All Saints' holiday

By Conner Middelmann

Activity in tbe eurobond market was muted ahead of today's All Saints' holiday in much of Europe, but signs are that new issuance will pick up again in early November, with several deals waiting in the wings.

INTERNATIONAL BONDS

The US dollar sector expects, among others, a $500m global bond issue for Korea Development Bank via Lebman Brothers and Salomon Brothers; $250m of five-year bonds for US West Communications via Morgan Stanley; and an issue of subordinated 10-year bonds for Crédit National, via Morgan Stanley and CS First Boston.

In D-Marks, the Hellenic Republic is expected to launcb its long-awaited DM700m five-year floating-rate note offering via Citibank and WestLB tomorrow, and Colombia's widely rumoured DM200m, five-year issue via Deutsche Morgan Grenfell and SBC Warburg is due in the next few weeks. Venezuela is expected to bring an even bigger D-Mark offering soon, with Commerzbank as lead manager.

Yesterday the US Federal Housing Finance Board issued $500m of one-year floating-rate notes paying three-month Libor less 15 basls points. Another $200m of floating-rate notes came from Goldman Sachs, paying three-month Libor plus 35 basis points until the November 1998 call date, then 75 points over Libor.

Tennessee Valley Anthority's two-tranche offering was priced, with the five-year bonds yielding 20 basis points over Treasuries at the re-offer price, and the 30-years yielding 38 points over the long bond.

The D-Mark sector saw two 5.25 per cent four-year deals: DM500m of bonds for and by Commerzbank, which is rated Aa2/AA–, and DM350m for triple-A rated Südwestdeutsche Landesbank via BZW. Targeted at retail investors in Switzerland, Germany and the Benelux region, the deals might take time to get placed, dealers said. However, given the dearth of liquid four-year paper, and the strong performance of a recent four-year issne for SüdwestLB, they should get placed successfully.

NEW INTERNATIONAL BOND ISSUES

Borrower	Amount m.	Coupon %	Price	Maturity	Fees %	Spread bp	Book runner
US DOLLARS							
Federal Housing Finance Board‡	500	(a)	99.976R	Nov.1996	0.05R	-	Nomura International
Goldman Sachs Group(b)‡	200	(b1)	100.00R	Nov.2002	0.30R	-	Goldman Sachs International
Société Générale	100	4.75	99.13R	Nov.1996	0.10R	+5(T-bill)	NatWest Capital Markets
D-MARKS							
Commerzbank O'seas Finance(f)	500	5.25	101.05	Dec.1999	1.75	-	Commerzbank
Sudwest. LB Capital Mkts.(f)	350	5.25	99.80R	Dec.1999	0.225R	+8(7%-99)	B.de Zoete Wedd(Deutsch.)
YEN							
Sudwestdeutsche LB*	10bn	(c)	100.30	Nov.2015	0.40	-	Yamaichi Intl.(Europe)
Belgacom*	10bn	(d)	100.50	Nov.2015	0.50	-	Sanwa International
ITALIAN LIRE							
Council of Europe	150bn	zero	87.25	Jun.1997	1.25	-	Credito Italiano

Final terms, non-callable unless stated. Yield spread (over relevant government bond) at launch supplied by lead manager. *Unlisted. ‡ Floating-rate note. R: fixed re-offer price; fees shown at re-offer level. a) 3-mth Libor -15bp. b) Callable on coupon dates from Nov.98 at par. b1) 3-mth Libor +35bp to Nov.98 and +75bp thereafter. c) 5.50% in Aus$, 5.35% in DM or 8.50% in US$; issuers option. d) 5.30% in DM, 5.70% in Aus$ or 5.50% in US$; issuers option. Short 1st & 2nd coupons. First coupon in DM. f) Long 1st coupon.

WORLD BOND PRICES

BENCHMARK GOVERNMENT BONDS

		Coupon	Red Date	Price	Day's change	Yield	Week ago	Month ago
Australia		7.500	07/05	82.1600	-0.190	8.71	8.54	8.62
Austria		0.875	06/05	99.7100	+0.170	6.91	6.98	6.74
Belgium		6.500	03/05	96.8900	+0.200	8.95	7.08	8.95
Canada *		8.750	12/05	108.2500	+1.600	7.56	7.96	7.84
Denmark		7.000	12/04	84.8000	+0.180	7.82	7.92	7.68
France	BTAN	7.750	04/00	104.4700	-0.010	6.47	6.84	6.53
	OAT	7.750	10/05	103.1600	+0.240	7.29	7.53	7.28
Germany Bund		6.500	10/05	100.4600	+0.250	6.43	6.51	6.44
Ireland		6.250	10/04	88.9000	+0.550	8.03	8.25	8.04
Italy		10.500	04/05	94.0200	+0.300	11.56†	12.03	11.18
Japan	No 129	6.400	03/00	118.7770	-0.040	1.56	1.56	1.56
	No 174	4.600	09/04	113.1900	+0.640	2.75	2.83	2.65
Netherlands		7.000	06/05	103.5800	+0.290	6.48	6.59	6.47
Portugal		11.873	02/05	103.5700	+0.130	11.21	11.30	11.08
Spain		10.150	01/06	93.5800	+0.510	10.84	10.98	10.76
Sweden		6.000	02/05	80.5690	-	9.20	9.24	8.55
UK Gilts		8.000	12/00	102-19	+8/32	7.37	7.65	7.37
		8.500	12/05	103-28	+17/32	7.93	8.21	7.84
		8.000	10/08	107-13	+18/32	8.07	9.31	7.92
US Treasury *		8.500	08/05	103-11	-	6.04	6.06	0.17
		6.875	08/25	107-02	+7/32	6.34	6.37	6.52
ECU (French Govt)		7.500	04/05	98.8100	+0.090	7.66	7.75	7.50

London closing, *New York mid-day. Yields: Local market standard.
† Gross (including withholding tax at 12.5 per cent payable by nonresidents)
Prices: US, UK in 32nds, others in decimal. Source: MMS International

US INTEREST RATES

Latest		Treasury Bills and Bond Yields			
		One month	5.44	Two year	5.64
Prime rate	[illegible]	Two month	5.53	Three year	5.72
Broker loan rate	[illegible]	Three month	5.39	Five year	5.84
Fed.funds	[illegible]	Six month	5.57	10-year	6.06
Fed.funds at intervention	-	One year	5.56	30-year	6.36

BOND FUTURES AND OPTIONS

France

■ NOTIONAL FRENCH BOND FUTURES (MATIF) FFr500,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	118.82	116.90	+0.16	117.00	118.70	81,962	113,208
Mar	115.16	116.26	+0.10	116.26	116.10	1,287	8,153
Jun	116.72	118.34	+0.06	116.72	115.92	426	7,171

■ LONG TERM FRENCH BOND OPTIONS (MATIF)

Strike Price	Calls Dec	Calls Mar	Calls Jun	Puts Dec	Puts Mar	Puts Jun
114	-	2.75	-	0.08	0.65	-
115	1.92	-	-	0.16	-	1.30
116	1.17	1.48	-	0.33	-	-
117	0.54	0.97	1.50	0.69	1.77	-
118	0.20	0.65	-	1.35	-	-

Est. vol. total, Calls 11,176 Puts 13,007. Previous day's open int., Calls 132,193 Puts 135,029.

Germany

■ NOTIONAL GERMAN BUND FUTURES (LIFFE)* DM250,000 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.40	96.03	+0.29	96.73	96.34	92642	196797
Mar	95.84	96.03	+0.29	96.04	95.80	613	6470

■ BUND FUTURES OPTIONS (LIFFE) DM250,000 points of 100%

Strike Price	Calls Dec	Calls Jan	Calls Feb	Calls Mar	Puts Dec	Puts Jan	Puts Feb	Puts Mar
9650	0.53	0.49	0.70	0.85	0.40	0.96	1.17	1.32
9700	0.29	0.33	0.51	0.66	0.66	1.30	1.48	1.63
9750	0.15	0.20	0.36	0.49	1.02	1.67	1.88	1.96

Est. vol. total, Calls 12218 Puts 13541. Previous day's open int., Calls 171705 Puts 153855

Italy

■ NOTIONAL ITALIAN GOVT. BOND (BTP) FUTURES (LIFFE)* Lira 200m 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	101.80	102.14	+0.48	102.53	101.75	33139	47216
Mar	101.60	101.78	+0.48	101.70	101.55	134	839

■ ITALIAN GOVT. BOND (BTP) FUTURES OPTIONS (LIFFE) Lira200m 100ths of 100%

Strike Price	Calls Dec	Calls Mar	Puts Dec	Puts Mar
10200	0.98	2.04	0.84	2.26
10250	0.74	1.81	1.10	2.53
10300	0.55	1.60	1.41	2.82

Est. vol. total, Calls 3345 Puts 1777. Previous day's open int., Calls 48241 Puts 47192

Spain

■ NOTIONAL SPANISH BOND FUTURES (MEFF)

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	88.63	89.04	+0.45	89.13	88.63	37,963	32,444
Mar	-	88.65	-	-	-	-	188

UK

■ NOTIONAL UK GILT FUTURES (LIFFE)* £50,000 32nds of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	106-06	106-26	+0-21	106-30	106-00	45428	99132
Mar	106-05	106-06	+0-20	106-09	106-05	10	785

■ LONG GILT FUTURES OPTIONS (LIFFE) £50,000 64ths of 100%

Strike Price	Calls Dec	Calls Jan	Calls Feb	Calls Mar	Puts Dec	Puts Jan	Puts Feb	Puts Mar
106	1-15	1-19	1-43	1-60	0-27	1-03	1-27	1-44
107	0-41	0-53	1-13	1-29	0-53	1-37	1-61	2-13
108	0-18	0-32	0-53	1-03	1-30	2-16	2-37	2-51

Est. vol. total, Calls 3475 Puts 3867. Previous day's open int., Calls 34150 Puts 29787

Ecu

■ ECU BOND FUTURES (MATIF) ECU100,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	87.22	87.32	+0.10	87.34	87.18	2,237	9,324

US

■ US TREASURY BOND FUTURES (CBT) $100,000 32nds of 100%

	Open	Latest	Change	High	Low	Est. vol.	Open int.
Dec	116-24	116-25	-	117-00	116-18	165,196	380,529
Mar	116-13	116-14	-	116-20	116-05	3,448	29,110
Jun	-	115-31	-	-	-	208	4,957

Japan

■ NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LIFFE) Y100m 100ths of 100%

	Open	Close	Change	High	Low	Est. vol	Open int.
Dec	121.34			121.66	121.33	4394	0
Mar	120.10			120.34	120.10	904	0

* LIFFE futures also traded on APT. All Open interest figs. are for previous day.

FT-ACTUARIES FIXED INTEREST INDICES

Price Indices UK Gilts	Tue Oct 31	Day's change %	Mon Oct 30	Accrued interest	xd adj. ytd
1 Up to 5 years (22)	121.24	+0.06	121.17	1.39	8.72
2 5-15 years (21)	145.09	+0.36	145.48	1.16	11.23
3 Over 15 years (9)	160.63	+0.57	161.18	1.55	11.80
4 Irredeemables (6)	181.16	+0.21	180.78	0.02	13.47
5 All stocks (58)	140.73	+0.31	140.97	1.32	10.91
Index-linked					
6 Up to 5 years (1)	193.34	+0.07	193.21	0.12	8.37
7 Over 5 years (11)	185.61	+0.14	185.35	0.85	4.45
8 All stocks (12)	185.66	+0.14	185.40	0.83	4.54

	Low coupon yield Oct 31	Oct 30	Yr. ago	Medium coupon yield Oct 31	Oct 30	Yr. ago	High coupon yield Oct 31	Oct 30	Yr. ago
5 yrs	7.49	7.53	8.63	7.50	7.53	8.65	7.59	7.61	8.8[illegible]
15 yrs	8.08	8.14	8.52	8.13	8.18	8.66	8.21	8.26	8.8[illegible]
20 yrs	8.13	8.20	8.47	8.17	8.23	8.66	8.25	8.29	8.7[illegible]
Irred.†	8.26	8.27	8.55						

	Inflation 5% Oct 31	Oct 30	Yr. ago	Inflation 10% Oct 31	Oct 30	Yr. ago
Up to 5 yrs	3.23	3.25	4.01	2.11	2.12	2.85
Over 5 yrs	3.66	3.69	3.87	3.48	3.49	3.68

Average gross redemption yields are shown above. Coupon Bands: Low: 0%-7¾%; Medium: 8%-10¾%; High: 11% and over. † Flat yield. ytd Year to date.

FT FIXED INTEREST INDICES

	Oct 31	Oct 30	Oct 27	Oct 26	Oct 25	Yr ago	High*	Low*
Govt. Secs. (UK)	93.47	93.33	93.07	93.36	93.19	81.06	95.51	90.22
Fixed Interest	111.66	111.51	111.60	111.64	110.86	107.64	114.66	108.77

* for 1995. Government Securities high since compilation: 127.40 (9/1/35), low 49.18 (3/1/75). Fixed Interest high since compilation: 133.87 (21/1/94), low 50.53 (3/1/75). Basis 100: Government Securities 15/10/26 and Fixed Interest 1928. SE activity indices rebased 1974.

GILT EDGED ACTIVITY INDICES

	Oct 30	Oct 27	Oct 26	Oct 25	Oct 24
Gilt Edged bargains	92.5	80.3	98.4	117.0	89.9
5-day average	95.6	97.5	97.1	94.0	88.4

FT/ISMA INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Latest prices at 7:10 pm on October 31

	Issued	Bid	Offer	Chg.	Yield
U.S. DOLLAR STRAIGHTS					
Abbey Natl Treasury 5 97	1000	98⅞	99⅛		5.94
Abbey Natl Treasury 6½ 03	1000	99½	99¾	+⅛	6.58
ABN Ambro Bank 7¼ 05	1000	103¾	104⅛	+⅛	6.62
African Dev Bk 7⅜ 23	500	102¼	102¾	+¼	7.18
Sweden 8 97	2500	106⅛	106½		4.61
United Kingdom 7¼ 97	5500	105	100		4.45
Volkswagen Intl Fin 7 03	1000	102	102¾	+¼	6.65
World Bank 0 15	2000	26¼	26¾	+⅛	6.87
World Bank 5⅞ 00	3000	95⅝	96⅛	+¼	6.43
Abbey Natl Treasury 8 03 £	1000	98	98¼	+¼	8.36
Alliance Leics 11⅛ 97 £	100	105⅞	106⅛	+⅛	7.10
British Land 8⅞ 23 £	150	91⅞	92¼	+¾	9.66
Denmark 6¾ 98 £	800	98⅞	98⅝		7.39
EIB 8 03 £	1000	99¼	99½	+⅛	8.12

[illegible]

UK GILTS PRICES

Notes	Yield Int	Yield Red	Price £	+ or -	1995 High	1995 Low
Shorts (Lives up to Five Years)						
Treas 14pc 1996	13.70	6.51	101$\frac{9}{16}$	-$\frac{1}{16}$	106⅝	101$\frac{9}{16}$
15¼pc 1996‡‡	14.61	6.40	104¼xd	-	109⅝	104½
Exch 13¼pc 1996‡‡	12.79	6.45	103$\frac{9}{16}$xd	-	107¼	103$\frac{9}{16}$
Conversion 10pc 1996	9.66	6.42	103$\frac{15}{16}$xd	-	104$\frac{13}{16}$	103$\frac{5}{16}$
Treas 13¼pc 1997‡‡	12.30	6.53	107$\frac{13}{16}$	+$\frac{1}{16}$	109$\frac{13}{16}$	105$\frac{13}{16}$
Exch 10½pc 1997	10.03	6.56	104$\frac{13}{16}$	-	105$\frac{23}{32}$	104$\frac{1}{16}$

[illegible]

Notes	Yield Int	Yield Red	Price £	+ or -	1995 High	1995 Low
Treas 12½pc 2003-5	9.87	7.94	126[illegible]	-[illegible]	1[illegible]	119[illegible]
Treas 8½pc 2005‡‡	8.19	7.93	103[illegible]	+[illegible]	105[illegible]	97[illegible]
7½pc 2006‡‡	7.75	7.93	96[illegible]	+[illegible]	96[illegible]	94[illegible]
7¾pc 2006‡‡	7.90	8.00	98[illegible]	+[illegible]	99[illegible]	92[illegible]
8pc 2002-6‡‡	7.98	7.97	100[illegible]	+[illegible]	101[illegible]	93[illegible]
Treas 11¾pc 2003-7	9.73	7.89	120[illegible]	+[illegible]	123[illegible]	113[illegible]

[illegible]

Index-Linked	Notes	Yield (1)	Yield (2)	Price £	+ or -	1995 High	1995 Low
2pc '96	(67.9)	0.36	3.28	213$\frac{1}{16}$	+[illegible]	213[illegible]	201[illegible]
4⅝pc '98‡‡	(135.6)	2.11	3.23	111[illegible]	+[illegible]	112[illegible]	108[illegible]
2½pc '01	(78.3)	3.13	3.62	176[illegible]	+[illegible]	177[illegible]	165[illegible]
2½pc '03	(78.8)	3.27	3.65	172[illegible]	+[illegible]	173[illegible]	161[illegible]
4⅜pc '04‡‡	(135.6)	3.28	3.63	114[illegible]	+[illegible]	115[illegible]	108[illegible]
2pc '06	(69.5)	3.35	3.62	180[illegible]	+[illegible]	183[illegible]	168[illegible]
2½pc '09	(78.8)	3.42	3.65	163[illegible]	+[illegible]	165[illegible]	152[illegible]

[illegible]

Other Fixed Interest

[illegible]

● 'Tap' stock. ‡‡ Tax-free to non-residents on application. E Auction basis. xd Ex dividend. Closing mid-prices are shown in pounds per £100 nominal of stock.

CURRENCIES AND MONEY

MARKETS REPORT

Quebec referendum result lifts Canadian dollar

By Graham Bowley

The Canadian dollar rallied strongly on the foreign exchanges yesterday after the people of Quebec voted in Monday's referendum to keep the province within Canada.

Although the vote was decided by only a narrow margin, the result was enough to push the Canadian dollar sharply ahead against the US dollar to the highs seen earlier this year.

The currency's surge allowed the Bank of Canada to cut its overnight lending rate by 25 basis points to a target range of 5.75-6.25 per cent.

After reaching a high around C$1.3350, the Canadian dollar retreated later in the session as traders took profits. Analysts said dealers were also unnerved by the slim margin of the deciding vote, which some feared might mean that another referendum on Quebec's independence would be called.

The currency finished in London at C$1.345 against the US dollar, compared with the previous close of C$1.3599. Most analysts said they saw room for the Canadian dollar to make further gains in coming sessions.

Analysts said that the Bank of Canada was likely to seek further cuts in short-term interest rates in an attempt to stimulate the weak domestic economy.

Mr Neil MacKinnon, chief economist at Citibank in London, said that further interest rate cuts would encourage buying of Canadian government bonds, which in turn would support the currency. But he said that the Canadian authorities might act to discourage too large an appreciation of the dollar in order to protect Canada's export performance.

■ Elsewhere in the currency markets, the US dollar enjoyed an early rally triggered partly by the Canadian referendum result. But it slid back later in the London session as the Mexican peso came under pressure.

More evidence of strong economic growth in the US failed to have an impact on the dollar. The Chicago purchasing managers index for October was stronger than expected, rising to 53.4 compared to 49 last month.

"The figures confirm that the US economy is growing well at the start of the fourth quarter, although this did not feed through into the currency," said Mr Adrian Cunningham, senior currency economist at UBS in London.

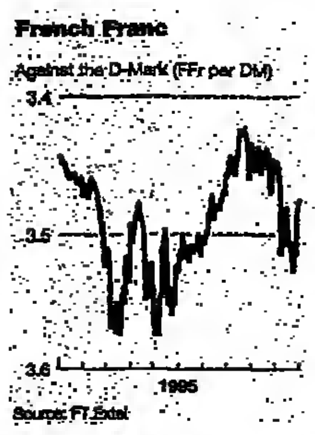
The dollar closed in London at DM1.4083, up from the previous finish of DM1.4053. Against the yen, it closed at Y102.2450, compared with Y101.5650.

■ Pound in New York

Oct 31	Latest	Prev. close
£ spot	1.5820	1.5785
1 mth	1.5809	1.5755
3 mth	1.5790	1.5736
1 yr	1.5684	1.5628

French Franc

Against the D-Mark (FFr per DM)



Source: FT Extel

With most European markets closed for holidays today, analysts said trading in most currencies was quiet with few investors prepared to take on large positions.

Traders were also on the sidelines ahead of US jobs data due on Friday, which will provide another guide to the current state of the US economy.

■ Disappointing French unemployment figures showing a rise of 28,200 in the number of people unemployed in September undermined the French franc.

"This highlights the inconsistency in the French policy of trying to keep the franc strong while at the same time trying to create more jobs," said Mr MacKinnon. "At some time the government will have to cut interest rates and then we will see further weakness in the French franc."

The franc finished unchanged against the D-Mark at FFr3.475.

■ Sterling had another quiet day. It ended higher against the D-Mark at DM2.2221, from DM2.2162. It was almost unchanged against the US dollar at $1.5779, from $1.5771. The sterling trade-weighted exchange rate index closed at 84.0, up from the previous close of 83.8.

The UK chancellor and the governor of the Bank of England meet today for their regular monthly discussion of interest rate policy. However, few analysts expect a change in rates. They think the authorities will wait at least until after the budget at the end of this month for the next change in monetary policy.

UK economic data out today include the August visible trade balance, which is expected to show a further widening of the deficit, the October purchasing managers' index and consumer credit figures.

■ The Bank of England provided £1.218bn assistance towards clearing a forecast money market shortage of around £1.2bn

■ OTHER CURRENCIES

Oct 31	£	$
Czech Rp	41.2883 - 41.3383	26.1800 - 26.1900
Hungary	207.507 - 207.717	131.550 - 131.600
Iran	4735.20 - 4732.20	3000.00 - 3000.00
Kuwait	0.4732 - 0.4737	0.3000 - 0.3001
Poland	3.8678 - 3.8734	2.4520 - 2.4540
Russia	7115.43 - 7117.22	4508.00 - 4512.00
U.A.E.	5.7938 - 5.7978	3.6729 - 3.6732

POUND SPOT FORWARD AGAINST THE POUND

Oct 31		Closing mid-point	Change on day	Bid/offer spread	Day's Mid high	Day's Mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	Bank of Eng. Index
Europe													
Austria	(Sch)	15.6373	+0.0398	290 - 456	15.7043	15.5899	15.6069	2.3	15.5483	2.3	-	-	107.2
Belgium	(BFr)	45.7212	+0.1437	925 - 499	45.8420	45.5920	45.6262	2.5	45.4362	2.5	44.7012	2.2	109.8
Denmark	(DKr)	8.6256	+0.0267	205 - 307	8.6460	8.5919	8.619	1.1	8.6014	1.1	8.5388	1.0	110.1
Finland	(FM)	6.7015	+0.0102	934 - 095	6.7250	6.6960	6.6971	0.8	6.689	0.7	-	-	87.9
France	(FFr)	7.7205	+0.0197	155 - 255	7.7403	7.6861	7.7275	-1.1	7.733	-0.8	7.7278	-0.1	110.1
Germany	(DM)	2.2221	+0.0059	210 - 232	2.2295	2.2143	2.217	2.8	2.2076	2.6	2.1668	2.5	112.6
Greece	(Dr)	365.978	+1.159	783 - 173	367.869	364.544	-	-	-	-	-	-	67.2
Ireland	(I£)	0.9753	-	744 - 762	0.9762	0.9744	0.9745	1.0	0.9732	0.9	0.9698	0.6	97.6
Italy	(L)	2515.41	-2.55	343 - 739	2520.53	2509.77	2522.66	-3.5	2537.56	-3.5	2605.71	-3.8	69.9
Luxembourg	(LFr)	45.7212	+0.1437	925 - 499	45.8420	45.5920	45.6262	2.5	45.4362	2.5	44.7012	2.2	109.8
Netherlands	(Fl)	2.4933	+0.0099	917 - 948	2.4983	2.4815	2.4869	3.1	2.4759	2.8	2.4297	2.6	109.6
Norway	(NKr)	9.8288	+0.0266	233 - 342	9.8547	9.7963	9.8164	1.5	9.7945	1.4	9.719	1.1	98.9
Portugal	(Es)	234.271	+0.596	119 - 424	236.169	234.108	234.811	-2.8	236.031	-3.0	-	-	95.3
Spain	(Pta)	192.898	+0.6	758 - 038	193.382	191.896	193.398	-3.1	194.338	-3.0	198.738	-3.0	81.0
Sweden	(SKr)	10.4829	+0.0325	736 - 921	10.5310	10.4138	10.4951	-0.3	10.4897	-0.3	10.513	-0.3	85.9
Switzerland	(SFr)	1.7933	+0.0032	919 - 946	1.8011	1.7872	1.7862	4.8	1.7743	4.2	1.7214	4.0	118.7
UK	(£)	-	-	-	-	-	-	-	-	-	-	-	84.0
Ecu	-	1.2138	+0.007	129 - 146	1.2146	1.2069	1.2127	1.1	1.2105	1.1	1.2011	1.0	-
SDR†	-	1.05165	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	1.5777	+0.0009	771 - 782	1.5820	1.5749	-	-	-	-	-	-	-
Brazil	(R$)	1.5176	+0.0012	167 - 184	1.5211	1.5136	-	-	-	-	-	-	-
Canada	(C$)	2.1223	-0.0223	208 - 237	2.1681	2.1020	2.1234	-0.6	2.1254	-0.6	2.1292	-0.3	85.0
Mexico	(New Peso)	11.2663	+0.4004	390 - 935	11.2942	10.9284	-	-	-	-	-	-	-
USA	($)	1.5779	+0.0008	774 - 784	1.5820	1.5747	1.5768	0.8	1.5749	0.8	1.5638	0.9	82.9
Pacific/Middle East/Africa													
Australia	(A$)	2.0744	+0.0043	731 - 757	2.0768	2.0728	2.0757	-0.8	2.0785	-0.8	2.0833	-0.9	87.2
Hong Kong	(HK$)	12.2000	+0.0054	957 - 042	12.2312	12.1764	12.1965	0.3	12.184	0.5	12.1504	0.4	-
India	(Rs)	53.9642	-0.9172	893 - 391	54.7570	53.7750	-	-	-	-	-	-	-
Israel	(Shk)	4.7787	-0.0028	732 - 841	4.7882	4.7729	-	-	-	-	-	-	-
Japan	(Y)	161.392	+1.159	256 - 407	161.720	159.920	160.417	6.6	158.807	6.3	151.862	5.9	140.1
Malaysia	(M$)	4.0125	+0.0012	107 - 143	4.0214	4.0076	-	-	-	-	-	-	-
New Zealand	(NZ$)	2.3906	+0.002	886 - 926	2.3977	2.3874	2.3965	-3.0	2.4058	-2.5	2.4314	-1.7	101.3
Philippines	(Peso)	41.0412	+0.0684	809 - 015	41.1052	40.9804	-	-	-	-	-	-	-
Saudi Arabia	(SR)	5.9179	+0.0031	159 - 199	5.9331	5.9062	-	-	-	-	-	-	-
Singapore	(S$)	2.2321	-0.0019	308 - 333	2.2388	2.2298	-	-	-	-	-	-	-
South Africa	(R)	5.7542	+0.0023	512 - 572	5.7659	5.7437	-	-	-	-	-	-	-
South Korea	(Won)	1207.33	+0.33	887 - 778	1210.39	1204.98	-	-	-	-	-	-	-
Taiwan	(T$)	42.5828	+0.0229	661 - 994	42.6903	42.4998	-	-	-	-	-	-	-
Thailand	(Bt)	39.7000	+0.0972	718 - 283	39.7870	39.6190	-	-	-	-	-	-	-

† Rates for Oct 30. Bid/offer spreads in the Pound Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. Sterling index calculated by the Bank of England. Base average 1990 = 100. Index rebased 1/2/95. Bid, Offer and Mid-rates in both this and the Dollar Spot tables derived from THE WM/REUTERS CLOSING SPOT RATES. Some values are rounded by the F.T.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Oct 31		Closing mid-point	Change on day	Bid/offer spread	Day's mid high	Day's mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	J.P Morgan index
Europe													
Austria	(Sch)	9.9102	+0.0199	081 - 123	9.9530	9.9060	9.8951	1.8	9.865	1.8	9.7557	1.6	107.2
Belgium	(BFr)	28.9780	+0.0755	670 - 850	29.0850	28.8700	28.935	1.7	28.858	1.7	28.558	1.4	109.4
Denmark	(DKr)	5.4665	+0.014	650 - 680	5.4850	5.4374	5.4672	-0.2	5.463	0.3	5.4725	-0.1	109.4
Finland	(FM)	4.2471	+0.0042	433 - 508	4.2678	4.2326	4.2468	0.1	4.2456	0.1	4.2411	0.1	87.2
France	(FFr)	4.8929	+0.0088	913 - 945	4.9070	4.8770	4.9014	-2.1	4.9114	-1.5	4.9329	-0.9	109.7
Germany	(DM)	1.4083	+0.003	080 - 085	1.4145	1.4018	1.4061	1.9	1.4018	1.8	1.3832	1.8	112.0
Greece	(Dr)	231.940	+0.61	890 - 990	233.440	230.700	233.685	-8.9	236.885	-8.5	250.34	-7.9	66.8
Ireland	(I£)	1.6179	+0.0009	169 - 189	1.6218	1.6145	1.619	+0.1	1.6191	-0.1	1.6246	-0.4	-
Italy	(L)	1594.15	-2.48	340 - 490	1599.70	1592.00	1600.9	-5.1	1612.95	-4.7	1670.15	-4.8	69.2
Luxembourg	(LFr)	28.9780	+0.0755	670 - 850	29.0850	28.8700	28.935	1.7	28.858	1.7	28.558	1.4	109.4
Netherlands	(Fl)	1.5801	+0.0054	798 - 808	1.5845	1.5719	1.5775	2.0	1.5724	2.0	1.5524	1.8	109.2
Norway	(NKr)	6.2290	+0.0135	275 - 305	6.2525	6.1962	6.2252	0.7	6.219	0.9	6.209	0.3	98.1
Portugal	(Es)	148.470	+0.26	420 - 520	149.920	148.300	148.935	-3.8	149.945	-4.0	154.57	-4.1	95.4
Spain	(Pta)	122.250	+0.315	200 - 300	122.860	121.800	122.63	-3.7	123.4	-3.8	126.895	-3.9	80.9
Sweden	(SKr)	6.6436	+0.017	398 - 473	6.6787	6.5973	6.6611	-3.2	6.6976	-3.3	6.8661	-3.3	85.4
Switzerland	(SFr)	1.1365	+0.0014	360 - 370	1.1428	1.1310	1.1329	3.8	1.1268	3.4	1.099	3.3	116.1
UK	(£)	1.5779	+0.0008	774 - 784	1.5820	1.5747	1.5768	0.8	1.5748	0.8	1.5638	0.9	83.3
Ecu	-	1.3000	-0.0068	995 - 005	1.3080	1.2978	1.3004	-0.4	1.3011	-0.3	1.3034	-0.3	-
SDR†	-	0.66772	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	0.9999	-	998 - 999	1.0001	0.9998	-	-	-	-	-	-	-
Brazil	(R$)	0.9618	+0.0003	615 - 620	0.9620	0.9613	-	-	-	-	-	-	-
Canada	(C$)	1.3450	-0.0149	445 - 455	1.3750	1.3340	1.3468	-1.5	1.3497	-1.4	1.362	-1.3	82.9
Mexico	(New Peso)	7.1400	+0.25	250 - 550	7.1550	7.1000	7.1422	-0.4	7.1454	-0.3	7.1503	-0.1	-
USA	($)	-	-	-	-	-	-	-	-	-	-	-	94.0
Pacific/Middle East/Africa													
Australia	(A$)	1.3146	+0.0021	142 - 151	1.3176	1.3129	1.3164	-1.8	1.32	-1.8	1.3397	-1.9	88.0
Hong Kong	(HK$)	7.7318	-0.0007	315 - 320	7.7325	7.7313	7.7333	-0.2	7.7353	-0.2	7.7555	-0.3	-
India	(Rs)	34.2000	+0.8	000 - 000	34.8500	34.1000	34.35	-5.3	34.655	-5.3	36.125	-5.8	-
Israel	(Shk)	3.0285	-0.0034	260 - 310	3.0377	3.0257	-	-	-	-	-	-	-
Japan	(Y)	102.245	+0.68	230 - 260	102.450	101.330	101.75	5.8	100.83	5.5	96.855	5.2	141.2
Malaysia	(M$)	2.5430	-0.0005	428 - 433	2.5460	2.5402	2.543	0.0	2.5434	-0.1	2.551	-0.3	-
New Zealand	(NZ$)	1.5148	+0.0004	142 - 158	1.5205	1.5138	1.519	-3.2	1.5265	-3.1	1.5512	-2.4	-
Philippines	(Peso)	26.0100	+0.03	800 - 400	26.0400	25.9800	-	-	-	-	-	-	-
Saudi Arabia	(SR)	3.7505	-	504 - 506	3.7507	3.7504	3.7511	-0.2	3.7518	-0.1	3.7551	-0.1	-
Singapore	(S$)	1.4145	-0.0018	142 - 149	1.4170	1.4140	1.4112	2.9	1.4049	2.8	1.3801	2.4	-
South Africa	(R)	3.6488	-0.0005	480 - 475	3.6500	3.6445	3.6721	-8.3	3.7221	-8.3	3.9533	-8.4	-
South Korea	(Won)	765.150	-0.2	100 - 200	766.000	765.000	768.15	-4.7	771.85	-3.4	790.15	-3.3	-
Taiwan	(T$)	26.9870	-	850 - 890	26.9900	26.9800	27.007	-0.9	27.047	-0.8	-	-	-
Thailand	(Bt)	25.1600	+0.01	500 - 700	25.1700	25.1380	25.2475	-4.2	24.895	4.2	26.115	-3.8	-

† SDR rate per $ for Oct 30. Bid/offer spreads in the Dollar Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. UK, Ireland & ECU are quoted in US currency. J.P. Morgan nominal indices Oct 30. Base average 1990=100

WORLD INTEREST RATES

MONEY RATES

October 31	Over night	One month	Three mths	Six mths	One year	Lomb. inter.	Dis. rate	Repo rate
Belgium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.00	3.50	-
week ago	4	[illegible]	[illegible]	[illegible]	[illegible]	6.00	3.50	-
France	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.00	-	7.00
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.00	-	7.00
Germany	4	[illegible]	[illegible]	[illegible]	[illegible]	5.50	3.50	4.03
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.50	3.50	4.03
Ireland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	6.25
week ago	[illegible]	[illegible]	[illegible]	6	[illegible]	-	-	6.25
Italy	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	9.00	10.77
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	9.00	10.99
Netherlands	[illegible]	[illegible]	[illegible]	[illegible]	4	-	3.50	3.70
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	3.50	3.70
Switzerland	[illegible]	2	2	2	2	5.00	2.00	-
week ago	[illegible]	2	[illegible]	[illegible]	[illegible]	5.00	2.00	-
US	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	5.25	-
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	5.25	-
Japan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	0.50	-
week ago	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	0.50	-
■ $ LIBOR FT London								
Interbank Fixing	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
week ago	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
US Dollar CDs	-	5.63	5.59	5.60	5.58	-	-	-
week ago	-	5.63	5.61	5.64	5.68	-	-	-
ECU Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
week ago	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
SDR Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
week ago	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-

$ LIBOR interbank fixing rates are offered rates for $10m quoted to the market by four reference banks at 11am each working day. The banks are: Bankers Trust, Bank of Tokyo, Barclays and National Westminster.

Mid rates are shown for the domestic Money Rates, US$ CDs, ECU & SDR Linked Deposits (Ds).

CROSS RATES AND DERIVATIVES

EXCHANGE CROSS RATES

Oct 31		BFr	DKr	FFr	DM	I£	L	Fl	NKr	Es	Pta	SKr	SFr	£	C$	$	Y	Ecu
Belgium	(BFr)	100	18.87	16.89	4.860	2.133	5501	5.453	21.50	512.5	421.9	22.92	3.922	2.187	4.641	3.451	352.8	2.665
Denmark	(DKr)	53.00	10	8.951	2.576	1.130	2919	2.890	11.39	271.6	223.6	12.15	2.079	1.159	2.460	1.829	187.0	1.407
France	(FFr)	59.22	11.17	10	2.878	1.263	3257	3.229	12.73	303.5	249.8	13.57	2.322	1.295	2.748	2.044	208.9	1.572
Germany	(DM)	20.58	3.882	3.475	1	0.439	1132	1.122	4.423	105.4	86.81	4.719	0.807	0.450	0.955	0.710	72.59	0.546
Ireland	(I£)	46.89	8.847	7.919	2.279	1	2579	2.557	10.08	240.3	197.8	10.75	1.839	1.026	2.173	1.618	165.4	1.245
Italy	(L)	1.818	0.343	0.307	0.088	0.039	100.	0.099	0.391	9.318	7.670	0.417	0.071	0.040	0.084	0.063	6.414	0.048
Netherlands	(Fl)	18.34	3.460	3.097	0.891	0.391	1009	1	3.943	93.98	77.38	4.204	0.719	0.401	0.851	0.633	64.70	0.487
Norway	(NKr)	46.52	8.776	7.855	2.261	0.992	2559	2.536	10	238.4	196.3	10.66	1.824	1.017	2.159	1.605	164.1	1.235
Portugal	(Es)	19.51	3.682	3.295	0.948	0.419	1073	1.064	4.195	100.	82.33	4.473	0.765	0.427	0.906	0.673	68.84	0.518
Spain	(Pta)	23.70	4.472	4.003	1.152	0.505	1304	1.292	5.095	121.5	100.	5.433	0.929	0.519	1.100	0.816	83.62	0.629
Sweden	(SKr)	43.63	8.231	7.367	2.120	0.930	2400	2.379	9.379	223.6	184.1	10	1.711	0.954	2.025	1.506	153.9	1.158
Switzerland	(SFr)	25.50	4.811	4.306	1.239	0.544	1403	1.390	5.482	130.7	107.6	5.845	1	0.558	1.183	0.880	89.96	0.677
UK	(£)	45.72	8.626	7.721	2.222	0.975	2515	2.493	9.829	234.3	192.9	10.48	1.793	1	2.122	1.578	161.3	1.214
Canada	(C$)	21.55	4.065	3.639	1.047	0.459	1185	1.175	4.632	110.4	90.90	4.939	0.845	0.471	1	0.744	76.01	0.572
US	($)	28.97	5.466	4.893	1.408	0.618	1594	1.580	6.229	148.5	122.2	6.641	1.136	0.634	1.345	1	102.2	0.769
Japan	(Y)	28.34	5.348	4.787	1.378	0.604	1559	1.546	6.094	145.3	119.6	6.497	1.112	0.620	1.316	0.978	100.	0.753
Ecu		37.66	7.105	6.360	1.830	0.803	2072	2.054	8.096	193.0	158.9	8.633	1.477	0.824	1.748	1.300	132.8	1

Danish Kroner, French Franc, Norwegian Kroner, and Swedish Kronor per 10; Belgian Franc, Yen, Escudo, Lira and Peseta per 100.

■ D-MARK FUTURES (IMM) DM 125,000 per DM

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.7111	0.7104	-0.0008	0.7147	0.7090	16,648	53,589
Mar	0.7137	0.7135	-0.0011	0.7137	0.7122	111	3,886
Jun	-	0.7160	-0.0013	-	0.7160	4	174

■ SWISS FRANC FUTURES (IMM) SFr 125,000 per SFr

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.8841	0.8822	-0.0019	0.8886	0.8798	12,532	34,043
Mar	0.8945	0.8905	-0.0017	0.8945	0.8899	149	1,989
Jun	-	0.8985	-	-	0.8985	1	409

■ JAPANESE YEN FUTURES (IMM) Yen 12.5 per Yen 100

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.9882	0.9844	-0.0039	0.9932	0.9830	10,939	61,130
Mar	1.0020	0.9982	-0.0036	1.0020	0.9972	185	8,064
Jun	-	1.0162	-	-	-	1	378

■ STERLING FUTURES (IMM) £62,500 per £

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	1.5744	1.5748	-0.0004	1.5772	1.5770	3,540	34,851
Mar	1.5710	1.5718	+0.0002	1.5716	1.5710	17	220
Jun	-	1.5676	-	-	-	2	10

Notice of Partial Redemption to the Holders of

Banco Central de Costa Rica

LEGAL NOTICES

LONDON SHARE SERVICE

BANKS, MERCHANT

	Notes	Price	+ or -	1995 high	low	Mkt Cap£m	Yld Gr's	P/E
Barings 8pc Cm 2nd Pf		80½xd		98	50¼	6.31	19.6	-
Cater Allen	♣v	471		525	418	153.5	7.7	7.1
Close Bros	♣v	316xa		*340½	216¼	378.5	3.4	ф
Gerrard & Nat	♣v	443	-2	480	395	218.2	6.3	14.3
Hambros	v□	201		253	180	398.0	4.7	50.7
7½pc Cv Pf		105		112	94	120.8	6.4	-
Joseph (L)	♣v	423		463	353	22.4	5.2	23.6
King & Shaxson	♣v	115		108	85	28.6	6.9	8.9
Rea Brothers	♣v	45		67	44	21.5	2.6	18.0
Schroders	♣†v□	1346	+43	*1478	805¼	2,032	1.3	16.2
N/V	†v	1110	+35	*1128	623¼	486.4	1.0	15.0
Singer & Fried	♣†v□	108xd		110	81	208.5	4.4	11.0
8½pc Cv Ln 08/14		£128½		£131	£105	38.7	6.0	-
Union	♣v□	109		131	76	27.0	3.6	-
Wintrust	♣v	295		299	200	28.1	4.8	18.9

BANKS, RETAIL

	Notes	Price	+ or -	1995 high	low	Mkt Cap£m	Yld Gr's	P/E
ABN Amro Fl	□	£27¾	+1½	£27¾	£21⅜	8,383	4.6	10.3
ANZ A$	†	284	-1	280	198	3,668	5.3	7.0
Abbey National	♣†v□	535½	+3½	577½	413	7,068	4.5	16.7
Allied Irish IE	♣†□	329		330	250	2,153	4.5	9.3
Anglo Irish IE	□	83		84	48	216.8	7.0	12.7
Asahi Y	□	[illegible]		[illegible]	[illegible]	14,679	6.7	-
Banco Bil Viz Pta	□	[illegible]		[illegible]	[illegible]	4,333	4.3	8.6
Banco Sant Pta		[illegible]		[illegible]	[illegible]	4,282	4.6	18.7
Bk Ireland IE	v□	420	+1	420	268	1,997	3.8	8.4
Bank Scotland	♣†v□	252xd	+3	270½	161½	2,988	3.0	11.1
9¼pc Pf		110¼xd		120	108¼	110.2	10.5	-
New 9 1/4pc Pf		118¼xd		118¼	108¼	110.2	10.5	-
6¼pc Pf		116¼xd	+¼	125¼	112¼	116.8	10.4	-
Barclays	♣†v□	743	+8	779	557½	12,014	3.8	10.1

BREWERIES

BUILDING & CONSTRUCTION

BUILDING MATS. & MERCHANTS

CHEMICALS

DISTRIBUTORS

DIVERSIFIED INDUSTRIALS

ELECTRICITY

ELECTRONIC & ELECTRICAL EQPT

ELECTRONIC & ELECTRICAL EQPT - Cont.

ENGINEERING

ENGINEERING, VEHICLES

EXTRACTIVE INDUSTRIES

EXTRACTIVE INDUSTRIES - Cont.

FOOD PRODUCERS

GAS DISTRIBUTION

HEALTH CARE

HOUSEHOLD GOODS

HOUSEHOLD GOODS - Cont.

INSURANCE

INVESTMENT TRUSTS

INVESTMENT TRUSTS - Cont.

INV TRUSTS SPLIT CAPITAL

LONDON SHARE SERVICE

INV TRUSTS SPLIT CAPITAL - Cont.

OTHER INVESTMENT TRUSTS

INVESTMENT COMPANIES

LEISURE & HOTELS

LEISURE & HOTELS - Cont.

LIFE ASSURANCE

MEDIA

OIL EXPLORATION & PRODUCTION

OIL, INTEGRATED

OTHER FINANCIAL

OTHER SERVICES & BUSINESSES

PAPER, PACKAGING & PRINTING

PHARMACEUTICALS

PROPERTY

PROPERTY - Cont.

RETAILERS, FOOD

RETAILERS, GENERAL

SPIRITS, WINES & CIDERS

SUPPORT SERVICES

SUPPORT SERVICES - Cont.

TELECOMMUNICATIONS

TEXTILES & APPAREL

TOBACCO

TRANSPORT

WATER

AIM

AIM - Cont.

AMERICANS

CANADIANS

SOUTH AFRICANS

	Notes	Price	+ or -	1995 high	1995 low	Mkt Cap£m	Yld Gr's	P/E
Anglo Am Ind		£31½	—	£34	£29	2,109	2.8	♦
Barlow	♣	£8⅞	+⅛	£9⅞	£4⅞	1,808	1.2	30.1
Gold Flds Prop R		148xd	—	182	118	14.8	7.2	8.6
NK Props		99	—	96	85	3.48	13.0	–
SASOL	♥	594	+3	648	435	3,127	2.5	–
SA Brews		£28⅛	—	£21⅛	£12⅞	5,920	1.7	28.4
Standard Bank	☐	£24¼	—	£24⅞	£20⅞	2,808	1.9	17.9
Tiger Oats		1049	—	1087	700	1,584	1.4	25.1
Tongaat-Hulett	¶	872	+12	872	636	794.7	1.6	28.1

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by FT Extel, a member of the Financial Times Group.

Company classifications are based on those used for the FT-SE Actuaries Share Indices.

Closing mid-prices are shown in pence unless otherwise stated. Highs and lows are based on intra-day mid- prices.

Where stocks are denominated in currencies other than sterling, this is indicated after the name.

Symbols referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend covers are published on Monday.

Market capitalisation shown is calculated separately for each line of stock quoted.

Earnings used in calculations are based on IIMR "Headline Earnings" formula.

Price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures.

Yields are based on mid-prices, are gross, adjusted for a dividend tax credit of 20 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- ☐ Indicates the most actively traded stocks. This includes UK stocks where transactions and prices are published continuously through the Stock Exchange Automated Quotation system (SEAQ) and non-UK stocks through the SEAQ International system.
- • Highs and lows marked thus have been adjusted to allow for capital changes.
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ♦ Figures or report awaited
- ♥ Rule 2.1(a)(iv) Overseas incorporated companies listed on an approved exchange.
- ♣ Free annual/interim report available, see details below.
- ✠ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Rule 4.2(a) Irish incorporated non-listed companies.
- # Price at time of suspension
- ¶ Indicated dividend yield after pending scrip and/or rights issue.
- ♦ Merger bid or reorganisation in progress
- § Forecast dividend yield; p/e based on earnings updated by latest interim statement.
- ♠ Unregulated collective investment scheme.

a Yield based on annualised dividend
h Figures based on prospectus or other official estimates.
g Assumed dividend yield after rights issue.
h Assumed dividend yield after scrip issue.
a Rights issue pending
q Earnings based on preliminary figures.
a Dividend yield excludes a special payment.
t Indicated dividend yield, p/e ratio based on latest annual earnings.
a Forecast, or estimated annualised dividend yield, p/e based on previous year's earnings
v P/e ratios are calculated under new ACT guidelines.
z Dividend yield includes a special payment
F Yield based on prospectus or other official estimates for 1994-95.
& Assumed yield after pending scrip and/or rights issue.
H Yield based on prospectus or other official estimates for 1995.
& Yield based on prospectus or other official estimates for 1994
L Estimated annualised yield, p/e based on latest annual earnings.
M Yield based on prospectus or other official estimates for 1995-96.
$ Forecast annualised yield, p/e based on prospectus or other official estimates.
W Pro forma figures.
Z Dividend yield to date.

Abbreviations:
xd ex dividend;
xc ex scrip issue;
xr ex rights;
xa ex all;
xl ex capital distribution.

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1275 a year for each security shown, subject to the Editor's discretion

♣ FT Free Annual Reports Service

You can obtain the current annual/interim report of any company annotated with ♣ . Please quote the code FT2595. Ring 0181 770 0770 (open 24 hours including weekends) or Fax 0181 770 3822. Reports will be sent the next working day, subject to availability.

Both Annual Reports and FT Company Focus are available from the above number.

FT Company Focus

Comprehensive 10-14 page report available on this company, containing key FT stories from the last year, latest survey of City profit forecasts and investment recommendations, 5 year financial and share price performance review, balance sheet and profit and loss data, plus recent Stock Exchange announcements for £6.45.

To order, call 0121 200 4678.

Reports published by ShareFinder Ltd.

FT Cityline

Up-to-the-second share prices are available by telephone from the FT Cityline service. See Monday's share price pages for details.

An International service is available for callers outside the UK, annual subscription £250 stg.

Call 0171 873 4378 for more information on FT Cityline.

For readers phoning from outside UK, please dial +44 in place of the first 0.

FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

Fidelity Currency Funds Ltd

Jupiter Tyndall (Bermuda) Ltd

BERMUDA (REGULATED)(**)

GUERNSEY (SIB RECOGNISED)

Royal Bk of Canada O/S Fd Mgrs Ltd - Contd.

Sarasin Funds Mngmt (Guernsey) Ltd

Schroder Investment Mngmt (Guernsey) Ltd

GUERNSEY (REGULATED)(**)

ANZ Mngmt Co (Guernsey) Ltd

Apollo Investment Management Ltd

Arab Bank Fund Managers (Guernsey) Ltd

Bachmann Global Investment Fund Ltd

IRELAND (SIB RECOGNISED)

GT Asset Management (Ireland) Ltd

IRELAND (REGULATED)(**)

Calpine Fund

Capital Vision Fund Plc

Chemical Ireland Fund Administrators Ltd

Citi Investment Fund (Ireland)

Citizens Investment Trust Mngt Company

DIT Dresdner Global Strategies Fund

Daiwa Europe Fund Managers Ireland Ltd

Dragon Korea Fund Plc

Dynamic Pacific Portfolio Fund Plc

Egerton Capital European Fund Plc

Emerging Dynamic Fund Plc

ISLE OF MAN (SIB RECOGNISED)

CMI Fund Managers - Contd.

Mercury Fund Managers IoM Ltd

Quilter Intl Mngt (IoM) Ltd

Sun Life Management (IoM) Ltd

Ulster Bank Global Funds Plc

Unibank Scandinavian Fund Ltd

ISLE OF MAN (REGULATED)(**)

JERSEY (SIB RECOGNISED)

JERSEY (REGULATED)(**)

Foreign & Colonial Mngmt - Contd.

LUXEMBOURG (SIB RECOGNISED)

LUXEMBOURG (REGULATED)(**)

[illegible]

هكذا من الاصل

FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

Clemente Korea Emerging Growth Fund

Merrill Lynch Asset Management - Contd.

Abtrust International Ltd

Royal Life International

Camco Investment Management Ltd

Global Asset Management - Contd.

Magnum Funds

Republic Funds

Monterey Trust SICAV

Morgan Stanley Sicav

Albany International Assurance Ltd

Capital International

Cathay Investment Fund Limited

Chase Manhattan Vista Funds

Magna Asset Management Ltd

Malaysia Capital Fund Ltd

Malaysia Fund (Labuan)

Malaysia Growth Fund

E D & F Man Investment Products

OTHER OFFSHORE FUNDS

OFFSHORE INSURANCES

MANAGED FUNDS NOTES

LONDON STOCK EXCHANGE

MARKET REPORT

Return of bid speculation lifts equity market

By Steve Thompson, UK Stock Market Editor

Big gains in many international stock markets, the return of the bid buzz and strong performances in the leading bond markets saw a return of confidence in UK equities yesterday.

Although turnover remained at relatively low levels, there was a much better feeling around the City's trading desks, especially in the last hour of trading when the rumours of imminent bid sctivity began to increase in intensity.

Another story belping to fuel the late run was that this morning's monthly meeting between Mr Kenneth Clarke, chancellor of the exchequer, and Mr Eddie George, governor of the Bank of England, could provide a surprise cut in UK interest rates, although dealers and analysts were sceptical tbat a reduction would take place with the Budget less than a month away.

Marketmakers said there were a number of bid stories doing the rounds towards the close, with the financial sectors said to be the favoured hunting ground for a predator. Schroders, one of the few remaining UK merchant banks, was said to be a target, as was Legal & General, the insurance group. Standard Chartered, the banking gronp, was another to attract takeover speculation, although dealers said gains owed more to US buying interest. in the wake of the bank's presentations to US institutions.

Traders gave limited credence to the Schroders talk, pointing to the minimal activity in the sbares, while the Legal & General bid story was seen as nothing more than a rerun of recent bursts of speculation. Nevertheless, Schroders topped the FT-SE 100 performance table.

It was also suggested that the market's good showing towards the day's close owed much to strong support for equities from one of the large US securities houses in the run-up to an expiry of OTC, or over the counter, options.

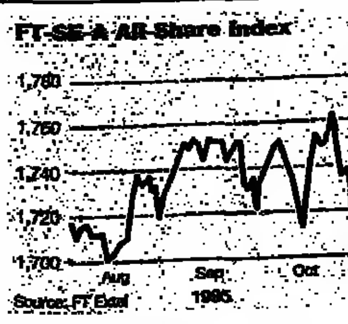
The FT-SE 100 index ended a net 19.1 higher at 3,529.1, while the FT-SE Mid 250 index moved up a more modest 11.8 to 3,894.3. News that the referendum over the separation of Quebec from the rest of Canada had narrowly favoured the status quo, plus Wall Street's latest advance, saw equities move ahead sharply at the outset, with the FT-SE 100 up more than 20 points within 30 minutes of the opening.

For the rest of the morning the market tended to ease back in relatively thin trading, reflecting small pockets of profit-taking. But with the Dow Jones Industrial Average opening in good form and up a further 20 points within a half-hour of the start, London began to pick up again, finishing only 3.3 below the day's best.

Talk of possible share buy-backs were behind several big moves around the various sectors, notably in Reuters and GUS. Body Shop topped the FT-SE Mid 250 list after reports suggested the retailer's two founders had held talks with a view to taking the company private.

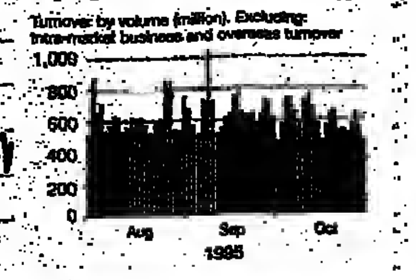
Turnover at 6pm was 528.7m shares, ahead of Monday's lowly 445.6m bnt still well down from recent levels. The value of customer, or retail, business in equities on Monday came ont at £883m, almost half thet of last Friday.

FT-SE-A All-Share Index



Equity shares traded

Turnover by volume (million). Excluding: intra-market business and overseas turnover



Indices and ratios

FT-SE 100	3529.1	+19.1
FT-SE Mid 250	3894.3	+11.8
FT-SE-A 350	1755.9	+8.6
FT-SE-A All-Share	1734.14	+7.85
FT-SE-A All-Share yield	3.86	(3.87)
FT Ordinary Index	2589.5	+10.1
FT-SE-A Non Fins p/e	16.66	(16.61)
FT-SE 100 Fut Dec	3541.0	+17.0
10 yr Gilt yield	7.93	(8.00)
Long gilt/equity yld ratio:	2.14	(2.14)

Best performing sectors

1. Banks, Merchant .... +2.1
2. Oil, Integrated .... +1.2
3. Banks, Retail .... +1.2
4. Property .... +1.2
5. Telecommunications .... +1.1

Worst performing sectors

1. Bldg. & Construction .... -0.9
2. Tobacco .... -0.9
3. Extractive Inds. .... -0.8
4. Health Care .... -0.8
5. Textiles & Apparel .... -0.7

Bounce for glass leader

Glass giant Pilkington advanced on the back of an interim results statement that one top analyst described as gift-wrapped with good things. Turnover in the stock surged to a three-year high and the shares ended 7 up at 189p.

The half-year profits sparked a round of broker upgrades, thanks partly to the clutch of European acquisitions, and the City also warmed to the £303m rigbts issue. This was uniformly seen as strategically correct. But wbat really impressed analysts was tbe tone of the results briefing under new chairman Mr Nigel Rudd. "It resounded with the smack of positive management," said one leading sector watcher.

BZW raised its profits estimate by £11m to £225m for this year and signalled a buy on the back of Pilkington's scope for recovery in operating margins. Collins Stewart moved up to profits of £250m but stuck to a sell recommendation, on cyclical trading concerns and p/e relative grounds.

The shares have been notably active in recent sessions, with a number of large lines of stock going through the market earlier this month. Turnover yesterday was 26m, including a 5m deal at 187p.

Housebuilders, hit by a downbeat annual meeting at Bryant Group, fared less well. Bryant shares dived 6 to a new low for the year of 98p. Wimpey came off 3 to 102p.

Reuters ahead

Sbare buy-back bopes ensured that Reuters Holdings, the news and information group, was once again one of the strong performers in the Footsie.

The ahares rose sharply on Monday after Mr Peter Job, the chief executive, said in a conference call to US and UK analysts: "It is really rather necessary for the tax anthorities to give an unambiguous ruling [about buy-backs]. We have a dialogue going on with officials right now . . . we are not at all frightened of repurchasing shares. It is a good way to go . . ."

Yesterday tbe company attempted to dampen down the speculation. A spokesman said: "We are not in discussions with the Inland Revenue with regard to any tax break. It is a more general discussion with the Treasury abont the overall environment on tax and tax credits relating to share buy-backs in general."

Reuters shares moved up 25 in early trading to hit a new all-time intra-day high and settled a net 12 higber at 588p, after US selling.

Proposals by National Westminster, the high street bank, to sell its US arm were back in the spotlight yesterday.

NatWest shares rose 11 to 632p on renewed bopes that the company is close to selling NatWest Bancorp. NatWest put Bancorp up for sale in September. Although it has refused to comment on speculation that a disposal agreement is imminent, potential buyers have persistently been put through the rumour mill. HSBC was once again being considered as the most likely candidate yesterday. The Hong Kong bank's shares put on 13 at 941p.

NatWest was further helped by Credit Lyonnais Laing, which has featured the stock as a key buy, in a review which examines tbe potential cost savings to be achieved from tbe increasing use of technology. CLL sees the change in the banking industry as no less radical than the shift in manufacturing in the early 1980s.

Retailer Body Shop International triggered a wave of buy-back speculation in the stores sector after it sdmitted that the group's founders had held "preliminary discussions" about taking it back into private ownership.

However, the company said it had "not received a proposal from Gordon and Anita Roddick to take the company private" and added that they were not expected to make such a proposal in the near future, if at all.

But there was no disguising the market's excitement. The shares jumped 21 to 156p, to register the day's sharpest rise in the FT-SE Mid 250 index, as analysts moved to calculate a likely exit price. A consensus of a buy-ont price of around 220p a share had emerged by the end of the session.

Great Universal Stores was among the day'a main beneficiaries of the talk on sbare bny-backs, although analysts suggested that the company is more likely to announce a special dividend when it reports figures in December. The shares gained 11 at 571p, while Boots firmed 5 to 560p, with it too mentioned as a possible candidate for a share buy-back scheme. The group reports interim figures tomorrow.

Sears bucked the market trend, ending 1½ off at 101½p in trade of 8.1m after James Capel was said to have downgraded profits expectations.

Shell Transport gained 14 at 741p following encouraging brokers' comments ahead of third-quarter results due tomorrow.

Merrill Lynch reiterated a buy view, saying the numbers were "likely to surprise on the upside". Analyst Mr Simon Trimble believes Shell'a third-quarter replacement cost net income will come in at £1.15bn. The market range is between £1.05bn and £1.22bn. There was also talk that Cazenove was recommending the stock.

Among drinks shares, Whitbread was in demand ahead of todey's interim figures. The shares hardened 6 to 620p. NatWest Securities is looking for profits of £152.6m. Allied Domecq hardened 2 to 511p, with SBC Warburg said to have recommended the stock.

News of a £191m acquisition by MEPC cheered the market, helping the shares advance 13 to 376p. Mr Michael Prew at Panmure Gordon said: "The deal will bolster the revenue account and the restoration of dividend cover." But he added: "I am wary ahead of its net asset value (nav) declaration at the end of November."

Great Portland Estates put on 3 at 162p after announcing a £4.8m acquisition.

British Steel, a weak market lately on the back of steel price worries, found favour as a number of brokers freshened up buy advice. Both UBS and SGST reiterated their buy stance, which helped to lift the shares 2 to 163¾p.

SGST, which has top of the range profits of £530m pencilled for November 13 when British Steel. unwraps its interim statement, sees firm underlying demand in Europe and expects US prices to start to recover sometime next year.

The stock has trailed the market as a whole by 10 per cent over the past month. Yesterday's 6.5m turnover was said to have reflected a steady two-way pull.

The tightly traded shares of Schroders, the investment bank, rose 43 to 1346p as takeover speculation returned to the financial sector. Overseas interest was cited and ths name of BAT Industries was also cited but neither were given much credence. BAT fell 5 to 519p.

Presentations in the US helped Standard Chartered improve 11 to 521p.

Life Sciences, the scientific equipment manufacturer, dropped 36 to 86p after reporting a 16 per cent fall in interim figures and warning abont prospects for the full-year figures.

USM-quoted Le Creuset leapt 18 to 177p on news that the chairman, who owns 73.7 per cent of the company's shares, is in discussions about buying out the minority at a premium to the current price.

MARKET REPORTERS:
Peter John,
Joel Kibazo,
Jeffrey Brown.

FINANCIAL TIMES EQUITY INDICES

	Oct 31	Oct 30	Oct 27	Oct 26	Oct 25	Yr ago	*High	*Low
Ordinary Share	2589.5	2579.4	2565.5	2571.3	2582.4	2360.0	2666.5	2238.3
Ord. div. yield	4.11	4.12	4.15	4.13	4.10	4.36	4.73	4.02
P/E ratio net	15.57	15.51	15.43	15.57	15.87	18.37	21.33	15.35
P/E ratio nil	15.38	15.32	15.24	15.38	15.48	18.06	22.21	15.17

*For 1995. Ordinary Share index since compilation: high 2713.6 2/02/94; low 49.4 26/6/40
FT Ordinary Share index base date 1/7/35.

Ordinary Share hourly changes

Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	High	Low
2584.9	2585.8	2590.0	2589.1	2588.5	2588.2	2587.9	2587.6	2588.4	2597.0	2581.8

	Oct 31	Oct 30	Oct 27	Oct 26	Oct 25	Yr ago
SEAQ bargains	24,888	24,332	25,499	24,187	26,002	24,499
Equity turnover (£m)†	-	883.0	1696.1	1547.2	1596.4	1075.0
Equity bargains†	-	28,115	29,782	29,523	30,782	28,680
Shares traded (ml)†	-	467.0	569.0	645.3	582.5	435.2

†Excluding intra-market business and overseas turnover.

London market data

Rises and falls*		1995 Highs and lows		LIFFE Equity options	
Total Rises	698	Total Highs	55	Total contracts	23,340
Total Falls	543	Total Lows	58	Calls	13,735
Same	1,842			Puts	9,605

Oct. 31 *Data based on Equity shares listed on the London Share Service.

FUTURES AND OPTIONS

FT-SE 100 INDEX FUTURES (LIFFE) £25 per full index point (APT)

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	3536.0	3541.0	+17.0	3551.0	3527.0	10770	64449
Mar	3569.0	3569.0	+17.0	3569.0	3569.0	70	3262
Jun		3574.0	+17.0			0	134

FT-SE MID 250 INDEX FUTURES (LIFFE) £10 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec		3910.0	+10.0			0	3537

FT-SE 100 INDEX OPTION (LIFFE) (*3529) £10 per full index point

	3350 C	3350 P	3400 C	3400 P	3450 C	3450 P	3500 C	3500 P	3550 C	3550 P	3600 C	3600 P	3650 C	3650 P	3700 C	3700 P
Nov	186	5	140	8	97	13½	59½	28	31½	53	14	88	4½	134	1½	184
Dec	210	17½	168½	25½	130	38½	96	58	65½	77½	44	106½	26½	143	15½	185½
Jan	238½	29½	193	42	155½	55½	125½	75½	95½	97½	73½	128	53	158	39	196
Feb	249½	39	212	51	176½	66	149½	85½	116	107	93½	135	71	165	54½	201½
Jun†			259½	96			196	133			145½	180½			101	237

Calls 7,852 Puts 6,405

EURO STYLE FT-SE 100 INDEX OPTION (LIFFE) £10 per full index point

	3375 C	3375 P	3425 C	3425 P	3475 C	3475 P	3525 C	3525 P	3575 C	3575 P	3625 C	3625 P	3675 C	3675 P	3725 C	3725 P
Nov	168½	5½	115	9½	75	19	42½	35½	20	64	6	101½	3	146½	1	194½
Dec	188	21½	145	30	108	44	78	62	52	85½	31½	115	18	151	10	192½
Jan	212½	37	173½	47½	138½	62	107½	80	88½	102½	58½	129½	41	161½	28½	198
Mar			207½	67½			142½	99½			96	144½			54	206
Jun†			240½	101			185½	138½			135	184			93	237

Calls 632 Puts 454 * Underlying index value. Premiums shown are based on settlement prices.
† Long dated expiry months.

LONDON RECENT ISSUES: EQUITIES

Issue price p	Amt paid up	Mkt. cap (£m.)	1995 High	1995 Low	Stock	Close price p	+/-	Net div.	Div. cov.	Grs yld	P/E net
-	F.P.	32.2	93	92	Abtrust Asian Smlr	92		-	-	-	-
-	F.P.	2.27	33	32	Do Warrants	32½		-	-	-	-
-	F.P.	2.37	10	5	†Arlon Props	10	+1	v-	-	-	-
-	F.P.	-	50	50	†Chartwell Intl	50		-	-	-	-
50	F.P.	15.0	71	60	Consolidated Coal	66	+3	-	-	-	-
-	F.P.	37.4	139	102	†Croce Ind	104		-	-	-	-
-	F.P.	-	100	100	Fleming Jpn C	100		-	-	-	-
-	F.P.	0.56	28	17	German Sml Wts	17		-	-	-	-
-	F.P.	5.70	40	25	Hay & Robertson	38		v-	-	-	-
-	F.P.	11.7	115	112	†Indpt Radio	117		v-	-	-	-
-	F.P.	-	543	488	†Intl Greetings	543		-	-	-	-
45	F.P.	17.3	61	52	†MultiMedia	60	-1	v-	-	-	-
-	F.P.	18.9	105	100	Murray Vct	103		-	-	-	-
400	F.P.	3.82	400	400	†Preston Nth End	400		v-	-	-	-

† Alternative Investment Market. For a full explanation of all other symbols please refer to The London Share Service notes.

FT GOLD MINES INDEX

	Oct 30	% chg on day	Oct 27	Year ago	Gross div yield %	P/E ratio	52 week High	52 week Low
Gold Mines Index (34)	1728.25	-0.9	1738.06	2169.65	2.09	-	2169.65	1697.91
Regional Indices								
Africa (16)	2272.74	-3.4	2352.96	3585.21	4.47	19.73	3585.21	2352.96
Australasia (6)	2224.34	+0.5	2213.22	2814.53	2.28	24.42	2831.09	1768.20
North America (12)	1496.96	+0.1	1495.04	1653.26	0.90	43.80	1831.00	1348.16

 Figures in brackets show number of companies. Basis US Dollars. Base Values: 1000.00 31/12/92. † Partial. Latest prices were unavailable for this edition.

FT - SE Actuaries Share Indices — The UK Series

	Oct 31	Day's chge%	Oct 30	Oct 27	Oct 26	Year ago	Div. yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
FT-SE 100	3529.1	+0.5	3510.0	3497.9	3519.6	3096.3	4.01	2.08	14.97	126.53	1400.30
FT-SE Mid 250	3894.3	+0.3	3882.5	3864.3	3885.3	3524.3	3.51	1.84	19.37	121.40	1516.86
FT-SE Mid 250 ex Inv Trusts	3914.8	+0.3	3904.5	3887.4	3907.3	3523.8	3.64	1.90	18.09	126.93	1524.77
FT-SE-A 350	1755.9	+0.5	1747.3	1740.8	1751.3	1551.4	3.90	2.03	15.76	61.11	1424.03
FT-SE-A 350 Higher Yield	1752.8	+0.5	1743.5	1737.5	1747.3	1557.0	4.94	1.82	13.87	77.06	1179.25
FT-SE-A 350 Lower Yield	1763.6	+0.5	1755.7	1748.7	1759.5	1506.0	2.81	2.42	18.37	43.86	1194.42
FT-SE SmallCap	1940.49	---	1940.76	1939.52	1949.61	1779.75	3.35	1.68	22.43	54.47	1562.64
FT-SE SmallCap ex Inv Trusts	1927.23	-0.1	1928.43	1929.79	1938.72	1749.36	3.57	1.74	20.15	57.29	1560.15
FT-SE-A ALL-SHARE	1734.14	+0.5	1726.29	1720.27	1730.57	1536.51	3.86	2.01	18.12	59.46	1429.39

FT-SE Actuaries All-Share

	Oct 31	Day's chge%	Oct 30	Oct 27	Oct 26	Year ago	Div. yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
10 MINERAL EXTRACTION(23)	2877.95	+0.6	2854.21	2850.05	2884.02	2740.33	3.92	2.09	15.29	105.02	1206.15
12 Extractive Industries(7)	4008.17	-0.8	4040.36	4022.92	4050.99	3873.02	3.69	2.51	13.49	143.77	1148.23
15 Oil, Integrated(3)	2874.47	+1.2	2839.08	2836.83	2875.48	2713.20	4.06	2.04	15.02	107.92	1233.45
16 Oil Exploration & Prod(13)	1677.15	+0.3	1671.40	1669.27	1678.56	1992.85	2.66	1.48	31.43	49.88	1114.22
20 GEN INDUSTRIALS(278)	1938.27	+0.2	1934.81	1930.75	1935.58	1859.21	4.26	1.83	16.01	71.11	1034.75
21 Building & Construction(36)	898.30	-0.9	906.27	897.95	900.70	1044.79	4.58	1.84	14.21	37.66	738.05
22 Building Matls & Merchs(31)	1672.77	+0.8	1667.64	1658.57	1660.45	1514.50	4.46	2.01	13.94	65.30	826.23
23 Chemicals(23)	2403.17	-0.2	2406.63	2401.84	2414.31	2305.94	4.01	1.89	16.50	80.65	1112.01
24 Diversified Industrials(20)	1761.60	+0.2	1758.47	1757.40	1750.54	1771.80	5.63	1.57	14.15	67.22	967.21
25 Electronic & Elect Equip(36)	2099.02	-0.2	2103.03	2095.39	2091.89	1857.51	3.57	1.98	17.69	61.51	1069.62
26 Engineering(68)	2135.47	+0.5	2125.27	2126.51	2138.94	1782.21	3.43	1.99	18.33	60.77	1270.22
27 Engineering, Vehicles(13)	2528.45	+0.8	2509.44	2497.80	2518.68	2246.49	3.71	1.17	28.89	92.33	1287.55
28 Paper, Pckg & Printing(27)	2882.59	+0.7	2863.24	2852.84	2885.09	2801.43	3.47	2.49	14.51	67.77	1176.69
29 Textiles & Apparel(21)	1505.75	-0.7	1515.67	1520.48	1534.59	1551.43	4.79	1.79	14.64	52.57	891.17
30 CONSUMER GOODS(91)	3459.91	-0.1	3461.92	3449.14	3468.46	2741.58	3.89	1.82	17.88	110.49	1249.92
31 Breweries(16)	2628.34	+0.5	2614.36	2604.72	2601.72	2259.16	3.79	1.99	16.58	62.79	1229.48
32 Spirits, Wines & Ciders(10)	2906.79	+0.8	2882.74	2875.87	2889.38	2666.52	4.11	1.84	16.49	107.13	1022.15
33 Food Producers(24)	2498.92	-0.1	2500.65	2480.03	2495.94	2292.82	4.05	1.80	17.14	83.82	1100.60
34 Household Goods(11)	2623.96	-0.5	2631.81	2623.79	2630.38	2423.30	3.65	2.20	15.57	88.72	984.32
36 Health Care(17)	1961.15	-0.8	1976.25	1974.96	1984.83	1609.39	2.65	1.83	25.77	48.10	1176.30
37 Pharmaceuticals(10)	4757.57	-0.3	4771.74	4751.83	4771.36	2980.40	3.48	1.70	21.15	153.87	1586.30
38 Tobacco(1)	4396.39	-0.5	4434.51	4447.21	4506.51	3666.03	5.46	1.80	12.09	229.23	1063.62
40 SERVICES(226)	2153.00	+0.4	2144.67	2133.92	2145.60	1905.43	3.10	2.05	19.63	59.74	1099.15
41 Distributors(30)	2678.70	+0.6	2663.55	2661.65	2685.34	2488.50	3.71	1.77	19.04	90.79	970.80
42 Leisure & Hotels(29)	2497.22	+0.5	2486.00	2470.09	2482.47	2052.13	3.21	1.84	21.11	73.67	1279.15
43 Media(43)	3374.37	+1.0	3339.76	3303.85	3336.48	2862.76	2.15	2.40	24.15	77.87	1206.38
44 Retailers, Food(16)	2047.29	-0.4	2055.91	2032.69	2035.73	1894.77	3.52	2.41	14.78	58.56	1272.74
45 Retailers, General(44)	1791.36	+0.5	1753.01	1755.81	1764.51	1831.65	3.33	2.13	17.65	50.36	987.86
48 Support Services(37)	1828.26	+0.1	1826.67	1815.34	1894.68	1506.64	2.50	2.43	20.61	38.97	1146.98
49 Transport(20)	2169.01	.....	2169.15	2180.65	2194.60	2265.03	3.94	1.29	24.64	72.66	893.37
51 Other Services & Business(7)	1188.55	-0.1	1189.17	1191.48	1205.53	1233.92	4.35	1.40	20.43	38.30	1064.09
60 UTILITIES(36)	2497.03	+0.7	2480.38	2468.22	2488.19	2467.29	4.58	2.00	13.64	95.19	1019.96
62 Electricity(14)	2806.61	+0.1	2802.96	2797.54	2803.71	2590.28	3.97	2.92	10.80	116.15	1248.90
64 Gas Distribution(2)	1605.23	+0.8	1592.43	1592.43	1609.54	1922.27	7.46	0.65	25.81	119.82	805.37
66 Telecommunications(7)	2073.45	+1.1	2051.65	2032.58	2055.24	2073.91	3.98	1.71	18.50	51.48	922.22
68 Water(13)	2070.66	+0.5	2061.26	2059.17	2083.29	1934.27	5.57	2.73	8.22	85.07	1100.55
69 NON-FINANCIALS(654)	1839.11	+0.8	1833.25	1826.69	1837.52	1659.10	3.88	1.93	16.66	62.79	1361.66
70 FINANCIALS(113)	2725.95	+1.0	2698.09	2691.75	2707.06	2186.72	4.08	2.45	12.49	103.73	1138.25
71 Banks, Retail(9)	3798.62	+1.2	3751.96	3752.83	3779.32	2879.20	3.83	2.81	11.60	140.51	1199.09
72 Banks, Merchant(6)	3596.16	+2.1	3524.02	3508.98	3583.97	2719.60	2.58	2.74	17.69	91.76	1123.81
73 Insurance(25)	1382.99	+0.3	1378.75	1369.62	1370.85	1257.67	5.33	2.69	8.72	72.25	1012.68
74 Life Assurance(6)	3250.35	+0.8	3222.72	3184.69	3207.72	2391.75	4.29	1.55	18.98	136.72	1324.20
77 Other Financial(22)	2399.26	+0.3	2392.27	2384.00	2385.03	1839.86	3.68	1.94	17.47	82.49	1336.56
79 Property(45)	1361.93	+1.2	1345.83	1344.09	1348.41	1450.72	4.58	1.33	20.60	46.43	615.67
80 INVESTMENT TRUSTS(133)	2904.69	+0.6	2886.26	2868.06	2890.69	2730.00	2.26	1.07	51.95	55.23	1001.26
89 FT-SE-A ALL-SHARE(900)	1734.14	+0.5	1726.29	1720.27	1730.57	1536.51	3.86	2.01	16.12	59.46	1429.39
FT-SE-A Fledgling	1075.55	+0.1	1074.63	1074.06	1078.56	-	2.84	1.28	34.39	26.57	1106.33
FT-SE-A Fledgling ex Inv Trusts	1076.00	+0.1	1075.39	1075.18	1079.16	-	2.98	1.34	31.38	27.51	1105.87

Hourly movements

	Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	High/day	Low/day
FT-SE 100	3517.2	3530.1	3524.9	3523.3	3525.3	3525.1	3524.8	3525.6	3529.0	3532.4	3517.2
FT-SE Mid 250	3887.0	3891.2	3893.1	3890.7	3891.7	3892.5	3891.3	3892.2	3893.4	3894.3	3887.0
FT-SE-A 350	1750.5	1756.0	1754.1	1753.3	1754.2	1754.2	1753.9	1754.3	1755.6	1757.1	1750.5

Time of FT-SE 100 Day's high: 9.15am Day's low: 8.30am . FT-SE 100 1995 High: 3593.0(18/10) Low: 2954.2 (23/1).

FT-SE Actuaries 350 Industry baskets

	Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	Close	Previous	Change
Bldg & Cnstrcn	899.4	899.4	899.4	896.3	899.3	899.3	898.8	898.0	887.5	887.5	900.2	-12.7
Pharmaceuticls	4718.0	4727.2	4710.7	4708.1	4706.4	4711.2	4710.8	4703.4	4702.1	4704.5	4718.3	-13.8
Water	2063.8	2063.7	2064.4	2064.3	2064.1	2064.1	2064.1	2066.0	2065.9	2065.9	2056.3	+9.6
Banks, Retail	3811.4	3829.4	3833.9	3832.9	3842.9	3843.6	3844.0	3846.6	3846.2	3847.1	3799.8	+47.3

Additional information on the FT-SE Actuaries Share Indices is published in Saturday issues. Lists of constituents are available from The Financial Times Limited, One Southwark Bridge, London SE1 9HL. The FT-SE Actuaries Share Indices Service, which covers a range of electronic and paper-based products relating to these indices, is available from FINSTAT, Fitzroy House, 13-17 Epworth Street, London EC2A 4DL.
The FT "500" has been renamed FT-SE-A Non-Financials index. The FT-SE 100, the FT-SE Mid 250, FT-SE Actuaries 350 and the FT-SE Actuaries Industry baskets are calculated by the International Stock Exchange of the United Kingdom and Republic of Ireland and the FT-SE Actuaries All-Share Index is compiled by The Financial Times Limited, both in conjunction with the Institute of Actuaries and the Faculty of Actuaries under a standard set of ground rules. "FT-SE" and "Footsie" are joint trade marks and service marks of the London Stock Exchange and The Financial Times Limited. The FT-SE Actuaries Share Indices are audited by The WM Company. † Sector P/E ratios greater than 80 and net covers greater than 30 are not shown. ‡ Values are negative. DELETION: Aero Hambie (Fledgling).

TRADING VOLUME

Major Stocks Yesterday

	Vol. 000s	Closing price	Day's change
3i†	273	409	+3
ASDA Group†	10,000	102½	-¼
Abbey National†	2,700	535½	+3½
Albert Fisher	1,900	51	
Allied Domecq†	1,400	511	+2
Anglian Water	305	583	+4
Argos	229	511	+8
Argyll Group†	2,800	322	-1
[illegible]	[illegible]	[illegible]	[illegible]

Based on trading volume for a selection of major securities dealt through the SEAQ system yesterday until 4.30pm. † Indicates an FT-SE 100 index constituent. All trades are rounded.

هكذا من الأصل

هكذا من الاصل

WORLD STOCK MARKETS

EUROPE

AUSTRIA (Oct 31 / Sch)

BELGIUM/LUXEMBOURG (Oct 31 / Frs.)

CZECH REP (Oct 31 / Koruna)

DENMARK (Oct 31 / Kr)

FINLAND (Oct 31 / Mks)

FRANCE (Oct 31 / Frs.)

GERMANY (Oct 31 / Dm.)

GREECE (Oct 31 / Drachma)

ITALY (Oct 31 / Lire)

NETHERLANDS (Oct 31 / Fls.)

NORWAY (Oct 31 / Kroner)

POLAND (Oct 31 / Zloty)

PORTUGAL (Oct 31 / Escudo)

SPAIN (Oct 31 / Pts.)

SWEDEN (Oct 31 / Kronor)

SWITZERLAND (Oct 31 / Frs.)

TURKEY (Oct 31 / Tk Lira)

PACIFIC

JAPAN (Oct 31 / Yen)

HONG KONG (Oct 31 / H.K.$)

INDONESIA (Oct 31 / Rupiah)

MALAYSIA (Oct 31 / MYR)

NEW ZEALAND (Oct 31 / NZ $)

SINGAPORE (Oct 31 / S$)

AUSTRALIA (Oct 31 / Aust$)

TAIWAN (Oct 30 / TW $)

THAILAND (Oct 31 / Baht)

SOUTH KOREA (Oct 31 / Won)

AFRICA

SOUTH AFRICA (Oct 31 / Rand)

NORTH AMERICA

CANADA

TORONTO (Oct 31 / Can $)

4 pm close

MONTREAL (Oct 31 / Can $)

4 pm close

INDICES

	Oct 31	Oct 30	Oct 27	1995 High		1995 Low	
Argentina General (29/12/77)	(u)	13301.32	13035.13	16831.10	2/1	8631.09	9/3
Australia All Ordinaries(1/1/80)	2073.7	2067.5	2067.4	2166.00	18/9	1823.30	8/2
All Mining(1/1/80)	937.0	935.9	936.3	1029.50	7/8	785.30	8/2
Austria Credit Aktien(30/12/84)	335.98	330.44	328.50	385.42	2/1	328.60	27/10
Traded Index(2/1/91)	924.98	898.46	891.09	1058.31	2/1	882.15	23/10
Belgium BEL20 (1/1/91)	1427.22	1422.72	1415.12	1481.38	2/8	1271.63	9/3
Brazil Bovespa (29/12/83)	(u)	40691.6	41408.0	48612.00	19/9	4531.60	8/8
Canada Metals Minls♦(1975)	(u)	4710.07	4630.99	5252.77	21/6	3808.83	1/3
Composite♦ (1975)	(u)	4379.80	4335.30	4710.30	12/7	3891.41	30/1
Portfolio§§ (4/1/83)	(u)	2172.43	2144.37	2307.81	12/7	1953.36	30/1
Chile IGPA Gen♥(31/12/80)	(u)	5953.3	5903.8	6063.10	11/7	4576.90	9/3
Denmark CopenhagenSE(3/1/83)	357.01	357.50	355.71	376.44	25/6	330.01	29/3
Finland HEX General(28/12/90)	1926.35	1934.74	1898.04	2332.22	14/9	1555.38	29/3
France SBF 250 (31/12/90)	1200.38	1190.83	1164.80	1322.30	12/5	1154.41	17/23
CAC 40(31/12/87)	1814.01	1795.34	1742.38	2017.27	12/5	1721.14	23/10
Germany FAZ Aktien(31/12/58)	781.78	777.82	765.61	846.75	19/9	708.87	30/3
Commerzbank(1/12/53)	2260.5	2248.0	2213.4	2427.80	19/9	2018.70	30/3
DAX (30/12/87)‡	2167.91	2146.11	2096.08	2317.01	15/9	1910.96	28/3
Greece Athens SE(31/12/80)	926.21	931.95	937.53	992.59	4/6	787.15	16/3
Hong Kong Hang Seng(31/7/64)	9782.39	9672.39	9680.75	10032.93	17/10	6967.93	23/1
India BSE Sens.(1979)	3423.47	3419.45	3444.12	3932.09	2/1	3015.07	2/5
Indonesia Jakarta Comp.(10/8/82)	486.45	490.81	494.47	519.18	11/8	414.21	19/4
Ireland ISEQ Overall(4/1/88)	2109.47	(c)	2081.55	2170.73	15/9	1813.89	23/1
Italy Banca Comm Ital (1972)	581.31	580.40	578.68	690.54	10/2	555.09	23/10
MIB General (2/1/95)	918.0	917.0	914.0	1076.00	10/2	877.00	23/10
Japan Nikkei 225 (16/5/49)	17654.64	17509.17	17337.19	19684.04	4/1	14485.41	3/7
Nikkei 300 (1/10/82)	264.56	261.88	259.53	286.18	4/1	222.28	13/6
Topix (4/1/68)	1411.14	1398.35	1388.43	1553.40	4/1	1193.16	13/6
2nd Section (4/1/68)	1864.85	1858.01	1859.45	2138.88	4/1	1441.50	13/6
Malaysia KLSE Comp.(4/4/86)	957.81	954.77	962.64	1005.84	5/6	840.87	24/1
Mexico IPC (Nov 1978)	(u)	2349.64	2245.92	2622.21	8/8	1447.82	27/2
Netherland CBS TtRtnGen(End 83)	495.1	489.2	485.4	511.80	19/9	422.80	23/3
CBS All Shr (End 83)	300.0	296.5	294.2	311.10	15/9	265.20	23/3
New Zealand Cap. 40 (1/7/86)	2179.36	2186.11	2177.66	2208.82	20/10	1901.43	5/1
Norway Oslo SE(Ind)(2/1/83)	1219.44	1212.36	1211.88	1282.36	18/10	1036.00	10/3
Philippines Manila Comp (2/1/85)	2480.73	2470.82	2512.34	2900.12	10/7	2349.39	27/3
Portugal BTA (1977)	2568.0	2571.8	2573.0	2811.80	9/1	2565.50	25/10
Singapore SES All-S'pore(2/4/75)	512.19	510.09	510.09	536.08	5/1	472.90	23/1
South Africa JSE Gold (28/9/78)	1270.7♥	1250.2	1279.8	2023.00	2/1	1259.20	30/10
JSE Ind. (28/9/78)	7510.2♥	7482.5	7456.1	7688.28	26/10	6222.08	31/1
South Korea KoreaCmpEx(4/1/80)**	990.26	982.87	1001.37	1027.37	2/1	847.88	27/5
Spain Madrid SE (30/12/85)	296.21	294.50	291.62	318.86	13/9	283.30	28/6
Sweden AffarsvarldsGen (1/2/37)	1714.2	1723.2	1687.8	1872.10	19/9	1430.80	29/3
Switzerland Swiss Bk Ind (31/12/58)	1423.89	1408.26	1393.45	1437.89	18/10	1174.88	13/3
SBC General (1/4/87)	1069.31	1056.01	1046.93	1079.82	18/10	879.58	13/3
Taiwan WeightedPr.(30/6/66)**	(c)	4817.04	4936.77	7051.49	5/1	4593.37	14/8
Thailand Bangkok SET (30/4/75)	1270.76	1273.53	1271.41	1472.04	10/7	1139.88	18/3
Turkey Istanbul Cmp.(Jan 1986)	48324.6	46531.1	47145.8	54853.90	21/4	29644.34	23/1
WORLD MS Capital Int (1/1/70)$	693.5*	689.9	684.8	703.80	29/9	598.21	23/1
CROSS-BORDER Eurotrack 100(26/10/90)	1398.80	1387.73	1363.93	1460.89	15/9	1222.41	13/3
Euro Top-100 (26/6/90)	1268.72	1256.47	1239.68	1318.88	15/9	1117.34	9/3
JCapelDpes (31/12/88)	(u)	326.06	320.51	349.47	14/7	282.87	23/1
Barings Emerg.(7/1/92)	141.12	141.20	140.55	158.07	2/1	117.19	10/3

INDEX FUTURES

	Open	Sett Price	Change	High	Low	Est. vol.	Open int.
■ CAC-40 (200 x index)							
Oct	1805.0	1819.1	+19.0	1823.0	1797.0	20,620	10,517
Nov	1814.0	1825.0	+16.5	1828.0	1806.5	24,573	24,438
■ DAX							
Dec	2160.0	2176.5	+15.5	2184.0	2157.5	21,052	-
Mar	2189.5	2197.5	+18.5	2203.5	2188.5	290	-
■ OMX							
Oct	1367.00	1365.00	-10.00	1375.00	1358.50	5,033	18,231
Nov	1372.00	1372.00	-2.00	1372.00	1370.00	20	70
■ SOFFEX							
Oct	3075.0	3112.0	+46.0	3114.0	3075.0	5,909	18,320
Nov	3087.0	3113.8	+34.5	3092.5	3087.0	89	1,712

** Sat Oct 28. Taiwan Weighted Price 4897.46; Korea Comp Ex 882.05. Base values of all indices are 100 except: Australia All Ordinary and Mining - 500; Austria Traded, BEL20, HEX Gen., MIB Gen., SBF250, CAC40, Euro Top-100, ISEQ Overall; Toronto Comp./Metals & Minerals and DAX - all 1,000; JSE Gold - 255.7; JSE 25 Industrials - 264.3; NYSE All Common - 50 and Standard and Poor's - 10. §§ Montreal. ♦ Toronto. (c) Closed. (u) Unavailable. ‡ IBIS/DAX after-hours index: Oct 31 - 8165.70 +16.05.

US INDICES

Dow Jones	Oct 30	Oct 27	Oct 26	1995 High	1995 Low	Since compilation High	Since compilation Low
Industrials	4756.57	4741.75	4703.82	4802.45 (19/10)	3832.08 (30/1)	4802.45 (19/10/95)	41.22 (2/7/32)
Home Bonds	103.74	103.60	103.78	104.04 (16/10)	93.83 (3/1)	109.77 (18/10/93)	54.99 (1/10/81)
Transport	1928.55	1904.24	1905.27	2000.38 (18/9)	1473.19 (3/1)	2000.38 (18/9/95)	12.32 (8/7/32)
Utilities	216.12	215.99	217.37	219.89 (25/10)	183.03 (3/1)	256.48 (31/8/93)	10.50 (8/4/32)

DJ Ind. Day's high 4798.84 (4766.86) Low 4718.48 (4659.24) (Theoretical♦)
Day's high 4765.80 (4742.48) Low 4741.75 (4676.00) (Actual♦)

Standard and Poors	Oct 30	Oct 27	Oct 26	1995 High	1995 Low	Since compilation High	Since compilation Low
Composite ‡	583.25	579.70	576.72	590.65 (19/10)	459.11 (3/1)	590.65 (19/10/95)	4.40 (1/6/32)
Industrials♥	686.20	680.79	677.78	691.54 (18/10)	546.28 (3/1)	691.54 (19/10/95)	3.62 (21/6/32)
Financial	57.71	57.96	56.99	61.39 (19/10)	41.64 (3/1)	61.38 (18/10/95)	8.64 (1/10/74)
NYSE Comp.	310.14	308.63	307.56	315.39 (19/10)	250.73 (3/1)	315.39 (19/10/95)	4.40 (25/4/42)
Amex Mkt Val	516.14	514.40	515.97	553.58 (12/9)	433.12 (6/1)	553.58 (12/9/95)	29.31 (9/12/72)
NASDAQ Cmp	1039.69	1025.55	1017.57	1067.40 (13/9)	743.58 (3/1)	1067.40 (13/9/95)	54.87 (31/10/72)

■ RATIOS

	Oct 27	Oct 20	Oct 13	Year ago
Dow Jones Ind. Div. Yield	2.46	2.42	2.42	2.70
	Oct 25	Oct 18	Oct 11	Year ago
S & P Ind. Div. yield	2.08	2.10	2.09	2.39
S & P Ind. P/E ratio	17.95	17.68	17.74	20.62

■ NEW YORK ACTIVE STOCKS

Monday	Stocks traded	Close price	Change on day
Citicorp	11,671,300	64⅝	+½
Micron Tech	5,834,500	72¼	+3
K-Mart	4,288,800	8⅝	-⅛
Telefonos	4,138,800	28⅝	+1
CBI Inds	3,944,400	30⅝	+10⅜
EMC Corp	3,571,600	15⅞	+¼
IBM	3,178,900	98	+1⅝
Compaq	3,164,800	54⅞	+1¼
Motorola	3,012,700	65½	-⅜
Wal Mart	2,792,100	21¼	-⅛

■ TRADING ACTIVITY

● Volume (million)

	Oct 30	Oct 27	Oct 26
New York SE	318.841	378.808	454.163
AMEX	13.072	18.317	17.843
NASDAQ	425.892	449.283	488.887
NYSE			
Issues Traded	3,043	3,025	3,065
Rises	1,286	1,145	633
Falls	982	1,077	1,702
Unchanged	775	803	720
New Highs	88	20	71
New Lows	46	81	111

	Open	Sett price	Change	High	Low	Est. vol.	Open Int.
■ S&P 500							
Dec	586.65	588.60	+1.90	589.10	587.55	66,904	197,390
Mar	592.40	593.60	+2.05	593.90	592.40	1,486	11,810
■ Nikkei 225							
Dec	17520.0	17670.0	+120.0	17700.0	17340.0	23,283	154,499
Mar	17500.0	17700.0	+200.0	17700.0	17460.0	26	7,153

Open interest figures for previous day.

† Correction. * Calculated at 15.00 GMT. ● Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. ♦ The DJ Ind. index theoretical day's highs and lows are the averages of the highest and lowest prices reached during the day by each stock; whereas the actual day's highs and lows (supplied by Telekurs) represent the highest and lowest values that the index has reached during the day. (The figures in brackets are previous day's). ♥ Subject to official recalculation.

■ TOKYO - MOST ACTIVE STOCKS: Tuesday, October 31, 1995

	Stocks Traded	Closing Prices	Change on day
Takara Shuzo	11.4m	896	+70
Nikon Corp	5.1m	1460	+60
Bunka Shutter	4.9m	718	+43
Kroseki Corp	4.8m	597	-13
Nippon Steel	4.1m	339	+3
Mitsubishi Hvy	3.8m	789	+11
Fudo Const	3.4m	910	-28
Toyo Sugar	3.2m	485	+10
Toshiba	3.0m	741	+7
Ricoh Co	2.7m	1100	+20

4 pm close October 31

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

1995 High	Low	Stock	Div.	Yld. %	P/E	Sls 100s	High	Low	Close Quote	Chng Prev. Close
10	12 3/8	AAR x	0.48	2.7	24	40	17 1/4	17 3/4	17 3/4	+1/8
40 1/8	35	AMP	0.92	2.3	28	4477	39 5/8	39 1/4	39 1/4	-1/4
80 1/4	53 3/8	AMR			15	6821	66 1/4	65 5/8	66	+1/8
47 7/8	36 3/8	ASA	1.71	4.6	24	361	37 1/2	37 3/8	37 1/4	+1/8
44 3/4	30 3/4	AbbtL	0.84	2.1	10	1410	40 1/8	80 1/2	39 3/4	+3/8
16 7/8	12	Abitibi Pr	0.40	2.3	9	2954	17 5/8	17 3/8	17 1/2	+7/8
27 7/8	21	ABM Ing	0.60	2.3	14	28	28 5/8	26 3/8	26 1/2	
17 1/2	10 1/4	Acptncxis			10	135	15 1/4	14 3/4	15	
35 7/8	21 7/8	ACE Ltd	0.56	1.0	0	526	34	33 1/2	34	+1/2
9 7/8	8 1/8	ACM Gvt In	0.90	8.5	0	326	9 5/8	9 3/8	9 1/2	+1/8
7 3/4	6 1/2	ACM GvOpp	0.66	0.9		86	7 3/8	7 1/4	7 3/8	
7 1/2	5 3/4	ACM Gvt Sp	0.75	10.0		165	7 1/8	6 7/8	6 7/8	-1/8
8 3/4	7 1/4	ACM Gvt Se	0.80	10.4		137	8 3/4	8 5/8	8 5/8	-1/8
9 1/2	7 5/8	ACM Man	0.90	10.3		626	8 7/8	8 5/8	8 3/4	-1/8
29 1/4	16 1/4	AcmeClv	0.48	2.2	10	114	22 1/2	21 7/8	21 7/8	+1/8
38 1/4	8 1/4	Acme Elect			71	182	8 7/8	8 5/8	8 5/8	
34 1/2	23 3/4	Acordia	0.72	2.6	14	46	31 1/2	27 1/4	21 1/2	+1/8
19 1/2	8 5/8	Actava	0.36	2.1	12	351	16	17 3/8	17 3/8	-1/8
16 3/4	10 1/4	Acuson			36	1224	12	11 3/4	11 3/4	-1/4
16 7/8	15 5/8	Adams Expr	0.48	2.6	0	303	18 5/8	18 3/8	18 1/4	+1/8
[illegible]										

- A - - B - - C - - D - - E - - F - - G - - H - - I - - J - - K - - L - - M - - N - - O - - P - Q - - R - - S -

Continued on next page

NYSE

AMEX

Have your

Financial Ti

4 pm close October 31

NYSE COMPOSITE PRICES

1995 High	Low	Stock	Div	Yld %	P/E	Sls 100s	High	Low	Close Quote	Chge Prev. Close
Continued from previous page										
26¾	20½	Scana Corp	1.44	5.7	16	819	25½	25¼	25¾	
18	14½	Scecorp	1.00	5.9	18	4438	17⅛	17	17	
11¼	6⅝	SchwnkA	0.26	3.9	11	255	6⅝	6¼	6⅝	+⅛
50¼	37¼	SchererRP			20	1083	44¾	43⅞	44½	-⅛
55⅝	35½	SchPl	1.16	2.2	18	5080	54	53⅜	53⅝	-⅜
69⅝	50⅛	Schlmb	1.50	2.4	23	8552	63¾	62¼	62¼	+1⅛
29	11¼	Schwab(C)	0.16	0.7	24	4366	23½	22⅞	22⅞	-½

1995 High	Low	Stock	Div	Yld %	P/E	Sls 100s	High	Low	Close Quote	Chge Prev. Close
139½	96½	Xerox	3.00	2.3	16	4538	130⅝	129¾	129¾	-4⅛
62½	42½	Xtra Corp	0.64	1.5	12	426	44½	43¾	43⅞	-⅞
22⅞	19½	Yankee Egy	1.26	5.9	13	147	21⅞	21⅜	21⅜	-¼
48½	34¼	York Int	0.24	0.5	16	1186	48¾	49⅛	48¾	+⅜
4½	2½	Zapata	0.14	5.0	9	24	3⅞	3⅞	3⅞	
12¼	6⅞	ZeitalEl			5	630	8½	8⅜	8⅜	-⅛
24⅝	19⅜	Zenith Nat x	1.00	4.3	12	59	23¼	22¾	23¼	+⅛
6⅞	3¼	Zenix Inc x	0.72	10.9		45	6⅝	6⅛	6⅝	
16⅞	12⅝	Zero	0.44	2.9	10	180	15¼	15	15¼	+⅛
26	16⅞	Zurn Ind	0.48	1.6	22	289	25⅛	24⅞	25	+⅛
11½	10¼	Zweig Fund	1.12	10.3		258	11	10⅞	10⅞	-⅛
8	7⅞	Zweig Tot	0.84	8.5		617	8¾	8⅝	8¾	+⅛

Price data supplied by Telekurs

Yearly highs and lows for NYSE reflect the period from Jan 1 1995. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration. Sales figures are unofficial.

d-new yearly low. P/E price-earnings ratio. sls-sales. u-new yearly high. x-ex-dividend or ex-rights. yld-yield. z-sales in full.
x Dealings suspended.

FT Free Annual Reports Service
You can obtain the current annual/interim report of any company annotated with ♣. Please quote the code FT3105. Ring 0181 770 0770 (open 24 hours including weekends) or fax 0181 770 3822. If calling from outside the UK, dial +44 181 770 0770 or fax +44 181 770 3822. Reports will be sent on the next working day, subject to availability.

AMEX COMPOSITE PRICES

4 pm close October 31

NASDAQ NATIONAL MARKET

4 pm close October 31

AMERICA

Toronto jumps 2.4% in wake of Quebec poll

Toronto rocketed in midday trading as the narrow defeat for Quebec separatists in Monday's referendum dispelled some of the doubts which had held investors back in recent sessions.

The TSE 300 composite index had moved forward 106.53 or 2.4 per cent by 1pm to 4,486.29 in very heavy volume of 71.2m shares.

In the first 15 minutes of trading the index jumped 131.89 to 4,511.65, in dealings described as frenzied by some analysts.

Leading banks dominated the active stocks list, led by National Bank of Canada, ahead C$¼ at C$11.

Royal Bank of Canada, the country's largest bank, was C$½ higher at C$30¾, while Bank of Montreal improved C$¾ to C$30.

Among Quebec based companies hurt in recent weeks by uncertainty ahead of the referendum, BCE, which is Canada's largest publicly traded company, rose C$1 to C$45.

Power Financial Corp added C$1¼ at C$31¼ and Bombardier class B rose C$¾ to C$16⅛.

Wall Street

Upward momentum, spurred by strong economic figures which inspired optimism about fourth-quarter earnings, helped blue chip shares move higher in early trading yesterday, *writes Lisa Bransten in New York.*

At 1pm the Dow Jones Industrial Average was up 35.04 to 4,791.61. The Standard & Poor's 500 added 2.32 at 585.57 and the American Stock Exchange composite rose 5.93 to 522.07. New York SE volume was 222m shares.

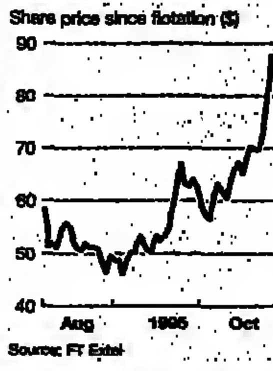
The market was confronted with a wave of economic figures at mid-morning, several of which were stronger than expected. The Chicago Association of Purchasing Management, for example, put its index of business activity at 53.4, the first time it has been above the critical 50-point level since May and the first increase in the figure since February. The regional figure is considered important because it serves as a pointer to the national figure, due out today.

Rising issues in the Dow included Caterpillar, up $1⅞ at $56⅝, United Technologies, $1⅞ stronger at $89¾, and Philip Morris, up $1 at $84¼.

Chrysler, however, gave up $1⅞ at $51⅞. It was reported that the carmaker told analysts that it expected lower sales in the fourth quarter.

One weaker than expected economic figure was consumer sentiment, which slipped to 97 in October from 97.3 in September, while most economists were expecting a modest increase.

The figure added to a growing view on Wall Street that weakness in retail sales was likely to be extended to the end of the year, and several retailers moved lower in early trading. Dayton Hudson declined $1 to $69⅝, Best Buy slipped $⅝ to $20⅞ and JC Penney was $¼ lower at $42⅝.



Gains in the technology sector were more modest as recent increases led to some profit-taking. The technology-rich Nasdaq composite rose 3.23 to 1,042.92; experience was mixed among the index's largest issues. Microsoft shed $⅝ to $101⅞ and Cirrus Logic fell $1½ to $42⅝, while Intel added $1⅛ at $70⅞ and America Online climbed $3 to $81⅞.

Netscape added to the sharp gain made on Monday after it announced that it would cut prices for its internet software in order to increase sales. The stock was $1¼ higher at $89⅝.

Brazil wins upgrade

Latin America's stock market performance is expected to lag behind that of Asia until well into 1996, in part because of sharp declines in economic activity in Mexico and Argentina, according to a new report from Lehman Brothers.

"Although the Mexican crisis has forced governments to reassess and strengthen the radical reforms undertaken since the beginning of the 1990s, it has also set back immediate growth prospects," Lehman said.

The firm upgraded Brazil's equities to overweight from neutral, citing the country's economic reforms, and maintained its overweight recommendation on Argentina and neutral position on Mexico.

MEXICO CITY encountered profit-taking after Monday's near 5 per cent surge and the IPC index was 15.57 easier in midday trade at 2,332.98 as renewed weakness in the peso clouded the mood.

SAO PAULO was ahead 1.5 per cent in lunchtime trading in a technical correction to the drop of more than 10 per cent since early last week. The Bovespa index had gained 617 at 41,308 by 1pm in thin turnover of R$85.5m ($88.9m).

S Africa wary ahead of poll

Johannesburg finished quietly firmer after a wary day's trade ahead of today's municipal polls and public holiday. Gold shares were boosted by a sturdy bullion price and industrials followed suit.

The overall index climbed 36.1 to 5,789.1, industrials jumped 47.7 to 7,610.2 and golds rose 20.5 to 1,270.7.

Amic dipped R3 to R184 and Amcoal shed R3 to R238 but Minorco was up R2 to R100, SAB moved forward 75 cents to R119.75 and Remgro advanced R1.25 to R33.25. Dries ended R1 up at R40.75.

EUROPE

Ciba's spin-off decision takes shares higher still

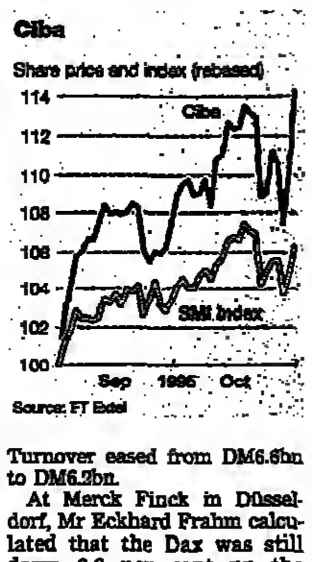
Weak money market rates and a marginally better dollar against the Swiss franc encouraged ZURICH to extend Monday's rally. The SMI index picked up 50.3 or 1.6 per cent to 3,108.2, firmly through the 3,085 resistance level.

Ciba registered appreciated SFr34 to SFr985, on top of Monday's SFr19 rise, in response to its plans to spin off the Mettler Toledo weighing machines division. Analysts noted that the market was giving a warm welcome to this indication that Ciba was following the lead of other Swiss pharmaceuticals and concentrating on its core businesses.

Nestlé, out of favour in recent months, jumped SFr35 to SFr1,185 as Credit Suisse added its voice to those upgrading their recommendations on the stock.

Financials continued to benefit from the outlook for buoyant securities earnings. Swiss Re registered put on SFr35 at SFr1,240 in a technical response to earlier losses.

FRANKFURT questioned the quality of the day's gain. The Ibis-indicated Dax index rose 16.05 to 2,165.76; but Ms Barbara Altmann at B Metzler noted that the key index had risen nearly 70 points since Friday's official close with no big clients around on the buy side.



Turnover eased from DM6.6bn to DM6.2bn.

At Merck Finck in Düsseldorf, Mr Eckhard Frahm calculated that the Dax was still down 0.9 per cent on the month, reflecting the rise of the D-Mark and its effect on export margins.

The year so far, said Mr Frahm, had produced a Dax gain of 2.9 per cent but he maintained that the bull run was not yet over: leading German economic institutes were forecasting an accelerated economic growth rate for the country in 1996, including a 3 per cent recovery in private consumption.

October's four biggest winners, Hoechst, Viag, Bayer and RWE, with share price rises ranging from 6.5 to 2.6 per cent, came from the high yielding chemicals and utilities sectors. The next two companies, Siemens and MAN, had produced good results recently.

The month's losers included Thyssen and Preussag, weak yesterday with falls of DM8.80 to DM397.25 and DM7.10 to DM253.40 on news of short term working in steelmaking. However, said Mr Frahm, there was also a suggestion that 1996 could become another good year for the steel industry; yesterday's moves, therefore, might be an overreaction.

MILAN put in another positive performance, although trading was slow with many investors absent, attending an ENI privatisation roadshow. The Comit index added 0.91 at 581.31, while the real time Mibtel index finished 138 or 1.5 per cent higher at 9,346.

Mr Andrea Azzimondi at CS First Boston believed that the market, which was now looking cheap, was set to bounce back in the next fortnight to the 610 to 620 level seen before the latest mini-crisis. The rally, initially, would be domestically driven, he said, although foreign investors, currently zero or underweighted in Italian equities, might also be expected to begin providing liquidity again soon.

FT-SE Actuaries Share Indices

Oct 31							THE EUROPEAN SERIES	
Hourly changes	Open	10.30	11.00	12.00	13.00	14.00	15.00	Close
FT-SE Eurotrack 100	1393.44	1393.53	1393.48	1395.42	1397.37	1397.03	1399.38	1399.80
FT-SE Eurotrack 200	1507.34	1507.94	1509.03	1511.13	1511.51	1512.46	1513.77	1513.72

	Oct 30	Oct 27	Oct 26	Oct 25	Oct 24
FT-SE Eurotrack 100	1387.73	1363.93	1374.41	1373.87	1363.11
FT-SE Eurotrack 200	1500.44	1481.07	1499.34	1499.02	1490.81

Base 1000 (26/10/90) High/day: 100 - 1399.93; 200 - 1515.18 Low/day: 100 - 1392.83 200 - 1509.72 † Partial

The volatile Ferruzzi continued to hog the limelight, rebounding L96 or 8.7 per cent to L1,199 after Monday's 16.7 per cent dive.

Banks also caught attention after market speculation on a possible rescue attempt by the government or another bank for the loss-making Banco Di Napoli. The stock traded in pre-bourse dealings; but for the second straight day it was unable to find an official trading level after being marked up to L1,050 from the previous close of L891. Elsewhere in the sector, San Paolo jumped L244 to L8,771 and Ambroveneto rose L154 to L4,133.

PARIS moved forward another percentage point, the CAC-40 index finishing 18.67 higher at 1,814.01 in turnover of FFr4.6bn, with financials cheered by hopes of a French interest rate reduction.

Société Générale rose FFr9 to FFr559, UAP FFr5 to FFr127 and Suez FFr4.40 to FFr184.60. In oils, Elf Aquitaine put on FFr7.50 at FFr333 on the early performance of the dollar, and on a co-operation deal with Electricité de France.

Shares in Eurotunnel, meanwhile, were down 10 centimes at FFr7.65 on warrant expiry considerations. In addition, said dealers, a court decision was due soon on whether the French and British railways must increase their contribution to the company.

AMSTERDAM saw a 42 per cent rise in profits from KLM after adjustment for tax and pensions peculiarities, and put the airline's shares up Fl 1.60 to FL 52.10. It digested more than doubled third-quarter profits from DSM and dropped the chemical company by Fl 3.50 to Fl 118.20, fearing for its fourth-quarter prospects after a forecast which implied an earnings decline in October/December.

The AEX index rose 5.63 to 453.56. Among other leaders, Royal Dutch added Fl 3.60 at Fl 195.90 after positive noises from London stockbrokers.

STOCKHOLM and HELSINKI, strong for much of the year, continued their recent weakness, with the Affärevärlden General index down 9.0 at 1,714.2 and the Hex 10.85 lower at 1,928.35.

The main Swedish losers were Ericsson B, off SKr7.50 at SKr141 on American selling, and the forestry sector, down 1.9 per cent on worries that the industry was approaching its cyclical peak. The Finns saw Nokia A FM4 cheaper at FM243, engineering and metals shares weak, but forestries relatively unscathed as the merger between Repola and Kymmene was being put to shareholders.

VIENNA recovered another 2.95 per cent, the ATX index rising 26.52 to 924.98. The energy group OMV rose Sch38 or 4.65 per cent to Sch855 on reports that Croatia's privatisation agency had cleared the sale of 12½ per cent of Janaf, operator of the Adriatic oil pipeline, to the Austrian group.

Written and edited by William Cochrane and Michael Morgan

ASIA PACIFIC

Nikkei overcomes worries about currency volatility

Tokyo

Fears that the Quebec referendum could cause volatility in currencies depressed equities initially, but the Nikkei average regained ground following reports of the slim majority against independence, *writes Emiko Terazono in Tokyo.*

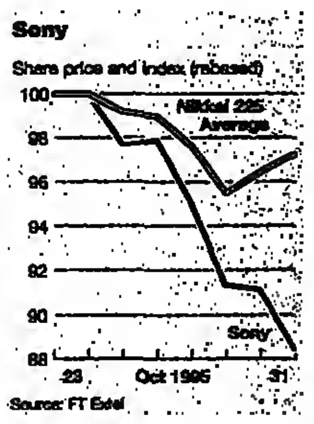
The 225 index closed 145.47 higher at 17,654.64 after extremes of 17,357.81 and 17,684.04 on arbitrage unwinding and buying by brokerage dealers. Investors were worried that a vote of independence by Quebec would cause concerns over the North American Free Trade Agreement which, in turn, would have depressed the dollar against the yen.

Volume increased from 245m shares to 290m. The Topix index of all first section stocks rose 12.78 to 1,411.14 and the Nikkei 300 by 2.68 to 264.56. Advances outpaced declines by 645 to 340, with 182 issues unchanged. In London the ISE/Nikkei 50 index put on 3.13 at 1,194.84.

Sony, the electronics group, dropped Y140 to Y4,600 on selling by Nomura Securities, taking its fall to 11.5 per cent over the past six trading days on speculation of rising inventories in the US and weak second-quarter earnings. "Audio visual makers will not have any profitable products until they come out with the digital video disc," said Mr Shigeru Yoshinaka, analyst at SBC Warburg, adding that selling could subside after the company announced its second-quarter earnings next week.

Other high-technology issues were firm thanks to Monday's sector rally on Wall Street. Personal computer makers and semiconductor related stocks were strong, with NEC up Y20 to Y1,350. Kyocera, the semiconductor package maker, gained Y60 at Y8,360.

Chemical makers, active over past weeks on hopes of higher demand for semiconductor related resins, were firm. Sumitomo Bakelite advanced Y20 to Y830.



Banks were bought by foreign investors, after their recent depression on concerns of higher funding costs in overseas capital markets. Daiwa Bank rose Y9 to Y610 and Fuji Bank added Y40 at Y1,900.

Individual investors dabbled in speculative shares. Takara Shuzo, a leading manufacturer of shochu, a white spirit made out of potatoes, was the day's most active issue; it jumped Y70 to Y896. Bunka Shutter, a lightweight shutter maker, climbed Y43 to Y718.

In Osaka, the OSE average rose 119.45 to 19,137.60 in volume of 14.4m shares.

Roundup

A 1.1 per cent advance was seen in HONG KONG but trade was thin ahead of today's holiday. The Hang Seng index rose 110.00 to 9,782.39 as turnover shrank to HK$2.5bn.

One broker noted that some Japanese investors had started buying for the month ahead, picking up property blue chips. Cheung Kong added 40 cents at HK$43.60 and Hutchison Whampoa 90 cents at HK$42.60.

Futures-related trading helped to boost HSBC Holdings, up HK$1 at HK$112.50, and Hong Kong Telecom, 35 cents ahead at HK$13.50.

SINGAPORE continued to be dampened by the Malaysian budget, although some bargain hunting emerged in selected blue chips in the last few minutes of trading. The Straits Times Industrial index finished a net 7.22 firmer at 2,107.38.

Goldtron and its warrants were among the most actively traded issues; the shares were down 7 cents to S$1.26 and the warrants, due to expire in a few weeks' time, lost 1.5 cents at 26 cents.

KUALA LUMPUR reversed early weakness as key blue chips bounced in the afternoon, although analysts noted that the moderate level of demand suggested bargain hunting rather than a change of mood. The composite index gained 2.84 at 957.61.

Traders said that worries over forged scrips of Genting added to the weak sentiment. Among Genting subsidiaries, Resorts World fell 20 cents to M$12.40 and Asiatic Development by 6 cents to M$2.50.

Renong declined a further 8 cents to M$3.88 after Monday's 36-cent fall which followed government moves to curb property speculation.

SEOUL bounced, taking the view that the latest news in the slush fund scandal allegedly involving Roh Tae-woo, the ex-president, had already been reflected in prices. The *composite index rallied* 7.39 to 990.26.

Sunkyong recouped some of its recent loss, rising Won500 to Won19,800, but Hanbo Steel fell Won510 to Won8,140 as it denied reports that it helped Roh to conceal Won33bn.

BANGKOK saw finance issues sold on expectations of poor third-quarter earnings. The SET index lost 2.77 at 1,270.76, with CMIC Finance and Securities off Bt2 at Bt80 and Wall Street Finance and Securities Bt4 lower at Bt118.

MANILA failed to erase sharp losses incurred in early trading, although selective technical buying emerged late in the session. The composite index closed 10.09 down at 2,460.73 after touching 2,436.73.

PLDT dragged the market *lower, dipping 60 pesos to 1,450* pesos following a $3 fall in New York overnight.

KARACHI ended slightly higher after institutions and funds defied expectations that they would be aggressive buyers in the wake of the devaluation and incentives package. The KSE-100 index hardened 2.39 to 1,567.57.

SHANGHAI's hard currency B shares bounced 1.2 per cent, supported by heavy orders in Shanghai Chlor Alkali Chemical. The index picked up 0.671 to 55.038 as Chlor Alkali added $0.010 or 3.8 per cent at $0.276.

SYDNEY balanced September current account figures which met market expectations against speculation about the timing of federal elections and continuing concerns over corporate profitability. Investors stayed on the sidelines as the All Ordinaries index rose 6.20 to 2,073.70.

Arnotts, the biscuit maker, moved up 20 cents to A$8.80 as Campbell Soup increased its majority stake, while the pipe and tube manufacturer Tubemakers of Australia slipped 7 cents to A$3.20 after a weaker first quarter and a flat to lower full-year profits forecast.

FT/S&P ACTUARIES WORLD INDICES

The FT/S&P Actuaries World Indices are owned by The Financial Times Ltd., Goldman, Sachs & Co. and Standard & Poor's. The Indices are compiled by The Financial Times and Goldman Sachs in conjunction with the Institute of Actuaries and the Faculty of Actuaries. NatWest Securities Ltd. was a co-founder of the Indices.

NATIONAL AND REGIONAL MARKETS	MONDAY OCTOBER 30 1995								FRIDAY OCTOBER 27 1995					DOLLAR INDEX		
Figures in parentheses show number of lines of stock	US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Local % chg on day	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	52 week High	52 week Low	Year ago (approx)
Australia (82)	182.09	0.9	171.19	116.90	133.04	158.96	-0.1	4.08	180.50	169.37	116.04	131.44	159.14	191.01	157.95	172.12
Austria (27)	169.54	0.3	159.36	108.84	123.86	123.82	0.7	1.35	168.94	158.52	108.61	123.02	122.98	199.29	167.48	181.32
Belgium (35)	194.39	0.2	182.74	124.80	142.02	138.54	0.8	3.78	194.04	182.06	124.74	141.29	137.72	201.12	164.78	169.17
Brazil (28)	135.30	-1.2	127.20	86.87	98.85	239.47	-1.2	1.76	136.93	128.48	88.02	99.70	242.28	–	–	–
Canada (100)	138.65	2.1	130.35	89.01	101.30	136.53	1.3	2.09	135.84	127.46	87.32	98.91	134.78	150.83	121.81	138.58
Denmark (33)	282.19	0.0	265.29	181.17	206.17	209.27	0.4	1.55	282.29	264.88	181.47	205.55	208.49	295.99	236.61	252.29
Finland (25)	228.73	2.1	215.03	146.85	167.11	203.67	2.5	1.57	223.96	210.14	143.97	163.07	198.70	278.11	171.13	200.12
France (100)	173.89	2.3	163.48	111.64	127.05	133.20	2.6	3.29	169.95	159.46	109.25	123.75	129.85	191.17	157.79	170.51
Germany (59)	157.89	1.4	148.43	101.37	115.35	115.35	1.8	2.07	155.66	146.06	100.07	113.35	113.35	167.74	136.39	143.02
Hong Kong (55)	371.89	-0.1	349.62	238.76	271.71	369.19	-0.1	3.94	372.41	349.45	239.41	271.18	369.74	391.00	277.40	380.77
Ireland (16)	241.27	-0.2	226.82	154.90	176.27	210.23	0.0	3.58	241.86	226.94	155.48	176.11	210.23	250.55	195.34	206.88
Italy (58)	70.57	0.0	66.34	45.30	51.56	64.14	0.1	1.81	70.57	66.22	45.37	51.39	64.09	82.71	65.45	78.94
Japan (483)	139.10	1.0	130.77	89.31	101.63	89.31	0.8	0.85	137.75	129.25	88.55	100.30	88.55	164.82	136.95	161.56
Malaysia (108)	464.54	-1.5	436.72	298.24	339.40	465.06	-1.1	1.81	471.68	442.59	303.23	343.46	460.05	561.96	398.18	547.46
Mexico (18)	984.30	7.4	925.34	631.92	719.12	7414.87	4.3	1.87	916.50	859.98	589.18	667.35	7109.58	2155.31	647.51	2126.47
Netherland (19)	253.12	0.5	237.96	162.51	184.93	181.92	0.9	3.59	251.81	236.28	161.88	183.36	180.34	263.99	207.60	220.32
New Zealand (14)	82.14	1.2	77.22	52.74	60.01	66.06	0.8	4.32	81.20	76.19	52.20	59.13	65.64	86.49	69.56	78.01
Norway (33)	226.33	0.1	212.77	145.30	165.35	190.94	0.3	2.19	225.99	212.05	145.28	164.58	190.35	243.79	192.92	204.73
Singapore (44)	368.40	-0.3	346.33	236.51	269.16	240.48	-0.2	1.71	369.60	346.81	237.60	269.13	241.08	414.26	313.94	395.96
South Africa (45)	356.33	-0.7	334.99	228.77	260.33	284.06	-0.3	4.10	358.68	336.56	230.58	261.18	285.00	368.62	281.08	334.57
Spain (38)	146.53	0.9	137.76	94.07	107.05	135.35	1.1	4.21	145.25	136.30	93.36	105.77	133.81	160.61	124.10	141.87
Sweden (46)	313.29	2.4	294.53	201.14	228.90	307.34	2.7	1.94	306.05	287.18	196.75	222.86	299.28	320.43	225.80	240.31
Switzerland (41)	220.93	0.8	207.88	141.84	161.41	155.47	1.1	1.71	219.07	205.56	140.83	159.52	153.80	223.54	158.38	162.30
Thailand (46)	159.40	1.3	149.85	102.34	116.46	155.59	1.4	2.62	157.39	147.58	101.18	114.60	153.50	–	–	–
United Kingdom (206)	223.42	0.2	210.04	143.44	163.23	210.04	0.4	4.08	222.99	209.24	143.35	162.38	209.24	227.31	187.07	203.28
USA (503)	238.87	0.6	224.56	153.35	174.51	238.87	0.6	2.47	237.50	222.85	152.68	172.94	237.50	242.04	182.33	193.37
Americas (649)	217.62	0.7	204.58	139.71	158.99	182.73	0.8	2.47	216.18	202.85	138.97	157.41	181.62	–	–	–
Europe (738)	193.05	0.8	181.49	123.94	141.04	161.36	1.1	3.12	191.44	179.63	123.07	139.39	158.61	199.02	183.04	173.79
Nordic (139)	282.82	1.7	265.88	181.57	206.63	237.84	2.0	1.85	278.09	260.94	178.78	202.50	233.11	295.02	215.79	231.61
Pacific Basin (832)	150.04	0.8	141.05	96.33	109.62	99.71	0.8	1.31	148.86	139.68	95.69	108.39	99.07	173.52	145.93	170.91
Euro-Pacific (1570)	167.87	0.8	157.81	107.77	122.64	122.99	0.9	2.16	166.51	156.24	107.04	121.24	121.94	178.33	154.73	172.00
North America (603)	232.67	0.8	218.74	149.38	169.99	232.03	0.8	2.48	231.22	216.96	148.64	168.38	230.64	235.91	178.98	189.85
Europe Ex. UK (532)	172.59	1.2	162.25	110.80	126.09	135.02	1.5	2.58	170.51	159.99	109.61	124.15	133.01	179.46	146.45	154.38
Pacific Ex. Japan (349)	252.68	0.0	237.54	162.22	184.61	221.10	-0.2	3.32	252.75	237.17	162.49	184.05	221.64	266.72	211.19	261.85
World Ex. US (1761)	168.77	0.6	158.66	108.35	123.30	126.46	0.8	2.23	167.38	157.04	107.59	121.87	125.39	178.73	155.42	173.89
World Ex. UK (2058)	187.09	0.8	175.88	120.11	136.68	153.82	0.8	2.13	185.61	174.16	119.32	135.15	152.53	191.32	163.46	176.99
World Ex. Japan (1781)	218.69	0.7	205.59	140.40	159.77	203.24	0.7	2.79	217.26	203.86	139.67	158.20	201.61	221.48	172.85	190.79
The World Index (2264)	190.26	0.7	178.86	122.15	139.00	158.73	0.7	2.32	188.87	177.22	121.42	137.53	157.56	194.25	165.92	179.31

PLEASE NOTE: First Data Corp. (USA) and First Financial Management Corp. (USA) have merged to form First Data (USA). First Data (USA) will replace the other two companies as an addition effective 1/12/95.
Latest prices were unavailable for this edition. Market closed 30/10/95: Ireland.